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Great Brita

THE

NAUTICAL ALMANAC

AND

ASTRONOMICAL EPHEMERIS

FOR THE YEAR

1855,

TO WHICH IS ADDED

A SUPPLEMENT,

CONTAINING

THE ELEMENTS AND EPHEMERIDES OF THE NEWLY-DISCOVERED PLANETS AND ENCKE'S COMET, FOR THE YEAR 1852.

PUBLISHED BY ORDER OF

THE LORDS COMMISSIONERS OF THE ADMIRALTY.

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CONTENTS,

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**** *The large Roman Numerals indicate the Page of each Month; the small, the Page of the Preface; and the Arabic, the Page of the Book.*

Pages.

Abbreviations and Symbols - - - - - - - - - - - - - - - - xiv
Calendar, Principal Articles of the - - - - - - - - - - - - xiii
Ceres, Elements of - - - - - - - - - - - - - - - - - - ix
—— Ephemeris of - - - - - - - - - - - - - - - - - - 351 to 353
———— for Opposition - - - - - - - - - - - - - - - 354 to 359
Configurations of the Satellites of Jupiter - - - - - - - - - - XIX
Co-ordinates of the Sun - - - - - - - - - - - - - - - - 243 to 250
Day of the Year - - - - - - - - - - - - - - - - - - - XX
Eclipses of Jupiter's Satellites - - - - - - - - - - - - - 532 to 560
———— the Sun and Moon - - - - - - - - - - - - - - - 523 to 528
Equation of Time - - - - - - - - - - - - - - - - - - - I and II
———— the Equinoctial Points - - - - - - - - - - - - - 242
Equinoctial Time - - - - - - - - - - - - - - - - - - - XX
Errata - xv
Explanation of the Articles, &c. - - - - - - - - - - - - - 597 to 624
Festivals and Anniversaries - - - - - - - - - - - - - - - xiii
Fraction of the Year - - - - - - - - - - - - - - - - - XX
Juno, Elements of - - - - - - - - - - - - - - - - - - viii
—— Ephemeris of - - - - - - - - - - - - - - - - - - 333 to 335
———— for Opposition - - - - - - - - - - - - - - - 336 to 341
Jupiter, Ephemeris of - - - - - - - - - - - - - - - - - 360 to 383
Jupiter's Satellites, Configurations of - - - - - - - - - - - XIX
———— Eclipses, Occultations, &c., of - - - - - - - - 532 to 560
Law Terms and Returns - - - - - - - - - - - - - - - - xiv
Longitude, Precession in - - - - - - - - - - - - - - - 242
Lunar Distances - - - - - - - - - - - - - - - - - XIII to XVIII
———— Correction for Second Differences of - - - - - - - 590
Mars, Ephemeris of - - - - - - - - - - - - - - - - - 300 to 323
—— Illuminated portion of the Disc of - - - - - - - - - - 570
Mean Time of Transit of the first point of Aries - - - - - - - XX
Mercury, Ephemeris of - - - - - - - - - - - - - - - - 252 to 275
[illegible]ior Planets, Elements of - - - - - - - - - - - - viii and ix
[illegible]minating Stars - - - - - - - - - - - - - - - 480 to 522
[illegible] of the - - - - - - - - - - - - - - - - - - 523 to 528

	Pages.
Moon, Ephemeris of the	III to XII
—— Meridian Ephemeris of the	480 to 522
—— Phases of the	XII
—— Apogee and Perigee of the	XII
—— Libration of the	570
—— Mean Longitude of the Node of the Orbit of the	242
Obliquity of the Ecliptic	242
Observatories, Latitude and Longitude of the Principal	591 to 596
Occultations of Stars by the Moon, visible at Greenwich	529 to 531
—— Elements for computing	571 to 582
—— of Jupiter's Satellites by Jupiter	532 to 560
Pallas, Elements of	ix
—— Ephemeris of	342 to 344
—— for Opposition	345 to 350
Phenomena	523 to 564
Pole Star, Tables to find the Latitude by the	583 to 585
Precession in Longitude	242
Stars, Mean Places of	432 to 434
—— Apparent Places of	438 to 477
—— Constants, for Reduction of	436 and 437
—— Logarithms of A, B, C, D, for Reduction of	XX
—— Formulæ, for Reduction of	435
—— Correction of, for 2 ☾	478 and 479
Saturn, Ephemeris of	384 to 407
—— Ring of	565
Sidereal Time at Mean Noon	II
Sun, Ephemeris of the	I to III
—— Eclipses of the	523 to 528
—— Aberration of the	242
—— Parallax of the	242
—— Co-ordinates of the	243 to 250
Terms, Law and University	xiv
Tides	566 to 569
Time Equivalents, Tables of	586 to 589
Transits of Jupiter's Satellites and their Shadows	532 to 560
University Terms	xiv
Uranus, Ephemeris of	408 to 431
Venus, Ephemeris of	276 to 299
—— Illuminated portion of the disc of	570
Vesta, Elements of	viii
—— Ephemeris of	324 to 326
—— for Opposition	327 to 332

Supplement - - - - - 625 to 646

PREFACE.

THE Contents of the NAUTICAL ALMANAC and ASTRONOMICAL EPHEMERIS for the year 1855 are the same generally as those of the preceding year; the additions are a Supplement containing Elements and Ephemerides of the newly-discovered Planets and Encke's Comet, for the year 1852.

The Sun's Longitude from the *Mean* Equinox, the Latitude, and the Earth's Radius Vector have been deduced from the New Tables appended to *Effemeridi Astronomiche di Milano per l'Anno* 1833, (Milano, 1832,) using a difference of Meridians of $36^m\ 45^s$.

The Longitude and Radius Vector have been computed accurately from the Tables for the Mean Noon of every 6th day of the year, and interpolated with fourth differences for each day.

The Latitude of the Sun, depending on the attraction of the Moon, was computed for every day, and that part depending upon the Planets, Venus and Jupiter, was obtained for each sixth day and interpolated.

The Nutations of the Obliquity of the Ecliptic ($\Delta\,\omega$) and of Longitude ($\Delta\,L$), have been derived from MS. Tables, constructed by the late Mr. JAMES EPPS, according to the following formulæ:

$$\Delta\,\omega = \quad 9''{\cdot}2500 \cos ☊ - 0''{\cdot}0903 \cos 2\,☊ + 0''{\cdot}0900 \cos 2\,☾ + 0''{\cdot}5447 \cos 2\,☉$$
$$\Delta\,L = -17''{\cdot}2985 \sin ☊ + 0''{\cdot}2082 \sin 2\,☊ - 0''{\cdot}2074 \sin 2\,☾ - 1''{\cdot}2550 \sin 2\,☉$$

where ☊ is the Mean Longitude of the Moon's ascending Node, ☾ the true Longitude of the Moon, and ☉ the true Longitude of the Sun (*Ast. Soc. Cat.*, pages xiv and xv); but the terms depending on $2\,☾$ have been omitted.

The Mean Obliquity of the Ecliptic has been taken $= 23^\circ\ 27'\ 29''{\cdot}67$, on January 1, 1855, and the Mean Annual diminution $= 0''{\cdot}457$. (BESSEL'S *Tab. Reg.* page 9.)

The Sun's Right Ascension and Declination were computed independently for the Mean Noon of every sixth day, and interpolated for each day with fourth differences; the correction of the Declination for Latitude was then applied to each day separately.

The Semidiameter of the Sun at the Earth's Mean Distance $= 16'\ 1''{\cdot}82$, being the result of the 12 years' Observations, 1836 to 1847, made at the Royal Observatory, at Greenwich. It may be proper to observe, that the Semidiameters of the Sun, inserted in the NAUTICAL ALMANAC, for the year 1852, depend on BESSEL'S mean value $16'\ 0''{\cdot}9$, but may be adapted to the new value by increasing each by its $\frac{1}{1000}$th part, without sensible error.

The Equatorial Horizontal Parallax of the Sun, at the Earth's Mean Distance has

been taken = 8″·5776, as deduced by Professor ENCKE, from the Transits of Venus in 1761 and 1769. (*Der Venusdurchgang von* 1769, &c. Gotha, 1824. page 108.)

The Constant of Aberration = 20″·42. (Preface to *B. A. Cat.*, page 21.)

The Sidereal Time at Mean Noon = $\frac{\text{Sun's Mean Longitude + Nutation.}}{15}$

According to BESSEL (*Tab. Reg.* page XXIV), the Mean Longitude of the Sun at Paris Mean Noon of January 0^d of the year 1800 + t, is

$$279° 54' 1''·36 + t.27''·605844 + t^2.0''·0001221805 - f.14'47''·083,$$

where f denotes, *for the 19th century*, the number of years from the year immediately preceding 1800 + t, which is divisible by 4 without a remainder. Assuming the Meridian of Greenwich to be 9^m 21^s·5 West of that of Paris, and altering the epoch to the Mean Noon of January 1 of the year 1800 + t, the Sun's Mean Longitude (M) for the meridian of Greenwich is hence found equal to

$$280° 53' 32''·75 + t.27''·605844 + t^2.0''·0001221805 - f.14'47''·083,$$

and we have, for the Mean Noon of any day (n) of the year 1800 + t,

$$\text{Sidereal Time} = \frac{\text{M}}{15} + n.\ 3^m\ 56^s·555348 + \text{Nutation in R.A.}$$

The Sun's Geocentric Co-ordinates have been computed from the following formulæ:

$$\text{X} = r \cos \odot$$
$$\text{Y} = r \sin \odot \cos \omega$$
$$\text{Z} = r \sin \odot \sin \omega = \text{Y} \tan \omega$$

in which r represents the Radius Vector of the Earth, $\odot$ the Sun's *true* Longitude from the *true* Equinox, and ω the apparent obliquity of the Ecliptic.

The Reductions Δ X, Δ Y, Δ Z of the co-ordinates to the Mean Equinox of January 1 have been obtained from similar formulæ; only using the Sun's Longitude from the Mean Equinox and the Mean Obliquity of the Ecliptic of January 1, 1855.

The Longitude of the Moon from the *Mean Equinox*, and the Latitude, have been derived from BURCKHARDT'S "*Tables de la Lune*" (Paris, 1812), using a difference of Meridians = 9^m 21^s: The arguments of the 32 minor equations of longitude have been taken from the Tables for each *tenth* Noon, and interpolated for every Noon by the continued addition of one-tenth of the difference, retaining throughout an additional figure; and the arguments of the other Equations have been taken from the Tables for each *fifth* Noon, and in a similar manner interpolated for every Noon and Midnight: with the arguments so formed, the 32 minor equations have been computed for every Mean Noon, their sums interpolated for every Midnight with fourth differences, and the remaining portion of the computation of the Longitude and Latitude performed independently for every Mean Noon and Midnight of the Year; second differences having been taken into account wherever the irregular variation of the Equations rendered such a correction appreciable. The Longitude has then been reduced to the True Equinox, and the results differenced to the fourth order, and carefully examined. Wherever the progression of the fourth differences indicated a probable error of more than 0″·5 the computations have been re-examined.

The Horizontal Parallax and Semidiameter of the Moon have been derived from BURCKHARDT's "*Tables de la Lune*," increasing the former by its $\frac{1}{1200}$th part, and the latter by its $\frac{1}{800}$th part.

The Horizontal Parallaxes and Semidiameters of the Moon in the NAUTICAL ALMANAC for the Year 1852 may be adapted to the alterations first introduced in the NAUTICAL ALMANAC for 1853 by increasing the first by its $\frac{1}{1200}$th part, and the second by its $\frac{1}{800}$th part.

The Right Ascensions and Declinations have been computed for each noon and midnight, examined by means of differences to the fourth order, and interpolated for every hour. From these have been deduced the Right Ascensions and Declinations at Transit on each day of the year.

The Lunar Distances from the Sun have been computed from Longitudes and Latitudes for every six hours, examined by means of differences to the second order, and interpolated for every three hours. Those from the Planets and Stars have been computed from Right Ascensions and Declinations for every six hours, examined by means of differences to the second, third, and sometimes fourth order, according to the irregularity of their variation, and interpolated for every three hours.

The Places of Mercury, Venus, and Mars, *from the Mean Equinox*, have been derived from LINDENAU's Tables,* assuming Greenwich to be $42^m\ 56^s$ West of Seeberg; and those of Jupiter, Saturn, and Uranus, from BOUVARD's new Tables,† with a difference of meridians of $9^m\ 21^{s}\cdot 5$; substituting only for Table XLII of Saturn, Mr. Adams's correct Table given in the NAUTICAL ALMANAC for 1851, page xiv.

For Mercury, the Perturbations were obtained immediately from the Tables for each alternate Mean Noon, and interpolated with first differences; the remainder of the calculations was performed independently for every Mean Noon.

For Venus, the Heliocentric Longitude from the *True Equinox*, Latitude and Radius Vector, were computed independently for Mean Noon of every eighth day, then interpolated with fourth differences for each day. The Geocentric places were computed for every fourth day, and the intermediate values obtained by interpolating with fourth differences.

For Mars, the Heliocentric Longitude from the *True Equinox*, Latitude and Radius Vector, were obtained independently for Mean Noon of every twelfth day, and interpolated with fourth differences for each day. The Geocentric places were computed for every sixth day, and interpolated with fourth differences.

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* Investigatio nova Orbitæ a Mercurio circa Solem descriptæ, accedunt Tabulæ Planetæ ex Elementis recens repertis et Theoria Gravitatis Illust. De Laplace constructæ. Auctore BERNHARDO DE LINDENAU. Gothæ, 1813. 4to.

Tabulæ Veneris novæ et correctæ ex Theoria Gravitatis clarissimi De Laplace et ex Observationibus recentissimis in specula Astronomica Seebergensi habitis erutæ. Auctore BERNHARDO DE LINDENAU. Gothæ, 1810. 4to.

Tabulæ Martis novæ et correctæ ex Theoria Gravitatis clarissimi De Laplace et ex Observationibus recentissimis erutæ. Auctore BERNHARDO DE LINDENAU. Eisenberg, 1811. 4to.

† Tables Astronomiques publiées par le Bureau des Longitudes de France, contenant les Tables de Jupiter, de Saturne et d'Uranus, construites d'après la Théorie de la Mécanique Céleste: par M. A. BOUVARD. Paris, 1821. 4to.

For Jupiter, Saturn, and Uranus, the Heliocentric Longitude from the *True Equinox*, Latitude and Radius Vector, were computed for Mean Noon at intervals of thirty days, and interpolated, for each day, with second differences. The Geocentric places were obtained independently for every sixth day, and interpolated for every day, using differences to the fourth order.

For the Minor Planets, with the Elements of their Orbits given at page ix of the NAUTICAL ALMANAC for 1854, the Heliocentric Longitudes have been first computed and the periods of the next Oppositions ascertained approximately. Vesta, Juno, Pallas, and Ceres are all in opposition in the Year 1855. For each of these Planets the Variations of the Elements, caused by Venus, the Earth, Mars, Jupiter, and Saturn, have been computed for intervals of twelve days, for the whole period between the Oppositions, agreeably to the method described in Professor AIRY's paper, "*On the Calculation of the Perturbations of the Small Planets and the Comets of short period.*"—(APPENDIX to NAUTICAL ALMANAC, 1837, page 149.)

For the Perturbations, the following masses of the disturbing Planets have been used; viz.—

Venus	$\frac{1}{401211}$	(AIRY, *On the corrections in the Elements of* Delambre's *Solar Tables, &c.—Phil. Trans.*, 1828, page 30).
Earth	$\frac{1}{354936}$	(*Système du Monde*, 5th Edition, page 209).
Mars	$\frac{1}{2680337}$	(BURCKHARDT, *Conn. des Temps*, 1831, page 153).
Jupiter	$\frac{1}{1048\cdot70}$	(AIRY, *Mem. Ast. Soc.*, vol. vi. page 97).
Saturn	$\frac{1}{3512}$	(*Système du Monde*, 5th Edition, page 209).

The following are the resulting Elements:—

I. VESTA.

Epoch, 1855, August 13·0 Mean Time at Greenwich.

Mean Longitude of ☖	ε	°	′	″	From Mean Equinox of Aug. 13, 1855.
		311	7	40·6	
Longitude of the Perihelion	ϖ	251	11	21·7	
Longitude of Ascending Node	ν	103	23	44·4	
Inclination of the Orbit	i	7	8	19·3	
Angle of Excentricity	φ	5	7	42·9	
Mean daily Sidereal Motion	n	977″·20295			

$\mathfrak{P}$ 1855, August 13, $4^h\ 53^m\cdot5$ Mean Time at Greenwich.

II. JUNO.

Epoch, 1855, May 21·0 Mean Time at Greenwich

Mean Longitude of ⚵	ε	°	′	″	From Mean Equinox of May 21, 1855.
		241	34	37·1	
Longitude of the Perihelion	ϖ	54	13	3·9	
Longitude of Ascending Node	ν	170	57	37·1	
Inclination of the Orbit	i	13	3	31·9	
Angle of Excentricity	φ	14	51	19·4	
Mean daily Sidereal Motion	n	814″·23623			

$\mathfrak{P}$ 1855, May 19, $0^h\ 10^m\cdot9$ Mean Time at Greenwich.

III. Pallas.

Epoch, 1855, September 18·0 Mean Time at Greenwich.

Mean Longitude of ⚴	ε	14	6	35·1	From Mean Equinox of Sept. 18, 1855.
Longitude of the Perihelion	ϖ	121	47	16·2	
Longitude of Ascending Node	γ	172	37	11·7	
Inclination of the Orbit	i	34	42	1·4	
Angle of Excentricity	φ	13	49	26·1	
Mean daily Sidereal Motion	n	768″·60321			

☍ 1855, September 13, $10^h\ 36^m{\cdot}2$ Mean Time at Greenwich.

IV. Ceres.

Epoch, 1855, November 5·0 Mean Time at Greenwich.

Mean Longitude of ⚳	ε	46	29	0·7	From Mean Equinox of Nov. 5, 1855.
Longitude of the Perihelion	ϖ	149	35	58·3	
Longitude of Ascending Node	γ	80	48	39·1	
Inclination of the Orbit	i	10	36	28·6	
Angle of Excentricity	φ	4	32	2·3	
Mean daily Sidereal Motion	n	771″·48786			

☍ 1855, October 30, $19^h\ 9^m{\cdot}2$ Mean Time at Greenwich.

With the Elements of Vesta, Juno, Pallas, and Ceres, and their Variations for intervals of twelve days preceding and following their respective Epochs, the Places of these Planets at Mean Noon about the times of their Oppositions were obtained.

The Ephemeris of each of the Planets, Mercury, Venus, Mars, Jupiter, Saturn, and Uranus, at the Time of Transit, has been computed for each day of the Year from their Places at Mean Noon. That of each of the Minor Planets, about their respective Oppositions, from the accurate Noon Ephemeris.

The Semidiameters of the Planets, at the Mean Distance of the Earth from the Sun, have been adopted as follow:

Mercury,	Eq. Sem.	3″·23 (Lindenau's *Tables of Mercury*, page 38).
Venus,	Eq. Sem.	8·25 (Delambre's *Astronomy*, vol. ii. page 620).
Mars,	Eq. Sem.	4·435 (Littrow's *Astronomy*, vol. ii. page 389).
Jupiter,	Eq. Sem.	99·704 (*Mem. Ast. Soc.*, vol. iii. page 301).
Saturn,	Eq. Sem.	81·106 (*Ast. Nach.* No. 189).
Uranus,	Eq. Sem.	37·25 (Delambre's *Astronomy*, vol. ii. page 620).

The Eclipses of Jupiter's Satellites have been computed from "*Tables Ecliptiques des Satellites de Jupiter, d'après la théorie de leurs attractions mutuelles et les constantes déduites des Observations.* Par le Baron Damoiseau. Publiées par le Bureau des Longitudes. Paris 1836," using $9^m\ 21^s{\cdot}5$ for the difference of meridians.

For the first Satellite, Equations 4 and 5 have been taken from the Tables for every Eclipse, and the other Equations for each sixth Eclipse. For the second Satellite, Equation 4 has been taken for every Eclipse, and the others for each fourth Eclipse. For the third Satellite, Equation 5 has been taken for every Eclipse, and the others for each second Eclipse. For the fourth Satellite, the whole of the Equations have been taken from the Tables for each Eclipse. In each

case the computation has been finished by interpolating, with second differences, the sums of those equations not taken from the Tables for each Eclipse.

It was formerly the practice to direct the attention of observers to those Eclipses only which happened when Jupiter was not less than 8° above the Horizon and the Sun 8° below. It appearing, however, by a paper read before the Royal Astronomical Society on April 13, 1838, (*Ast. Soc. Notices*, vol. iv. p. 131,) that Mr. RIDDLE observed the reappearances of the First and Second Satellites at Greenwich on April 9, 1838, without difficulty, when the Sun was much less than 8° below the Horizon, a new limit was adopted in the year 1842, and while the asterisk has been retained to indicate the Visibility agreeably to the old limits, a dagger is used to indicate that Jupiter is *above* the Horizon and the Sun *below*.

For the Configurations and Occultations of the Satellites, as well as the Transits of the Satellites and their Shadows over the disc of the Planet, Mr. WOOLHOUSE's Tables in the APPENDIX to the NAUTICAL ALMANAC for 1835 have been used, with the exception of Table II. of each Satellite, which has been reconstructed to adapt it to DAMOISEAU's New Tables.

The Elements at page 565, for determining the appearance of Saturn's Ring, have been calculated by means of the Formulæ* at page viii. of the NAUTICAL ALMANAC for 1836, adopting the late Professor BESSEL's determinations of the values of Ω, i and a' viz.:—

$$\left.\begin{aligned} \Omega &= 166^\circ\ 53'\ 8''\cdot9 + 46''\cdot462\ (t-1800) \\ i &= 28\ 10\ 44\cdot7 - 0\cdot350\ (t-1800) \end{aligned}\right\}\ \textit{Ast. Nach.}, \text{No. 274, col. 167.}$$

$$a' = 39''\cdot308\ (\textit{Ast. Nach.}, \text{No. 275, col. 170}),$$

the mean distance of the Planet from the Sun being taken $= 9\cdot54301$, agreeably to BOUVARD's Tables of Saturn, instead of $9\cdot5421889$, the value used by BESSEL in the reduction of his observations.

The Mean Places of 84 of the 100 Principal Fixed Stars for Jan. 1, 1855, have been derived from a manuscript by Mr. Adams, now preparing for publication, and the remaining 16 from the fundamental Catalogue for 1840, contained in the NAUTICAL ALMANAC for 1848, pages 436 to 441, by means of the Formulæ at page xiv of the PREFACE to the *Second Edition* of the NAUTICAL ALMANAC for 1834.

The Logarithms of A, B, C, D, at page XX. of each Month, have been computed agreeably to the Formulæ at page 435, omitting only in the Values of C and D the terms $-0\cdot004 \sin 2\,\mathbb{C}$ and $-0''\cdot090 \cos 2\,\mathbb{C}$; and for the only Stars that can be sensibly affected by the omission, viz., the five Polar Stars, a Table of Corrections is given at pages 478 and 479.

The Table of Constants at pages 436 and 437 for facilitating the Reduction of Stars *generally*, has been computed from BESSEL's Formulæ, given at page 435, using the A, B, C, D, contained in this volume.

The apparent places of 95 of the principal Stars have been deduced from the Mean Places for January 1, 1855, using the Variables A, B, C, D, in the present

* See Errata in the NAUTICAL ALMANAC for 1840, page xv.

Volume with constants computed for the year 1860, similar to those for 1850 in the Catalogue of the British Association.* For the five Polar Stars the constants have been computed for 1855 and 1856, and interpolated. The corrections were computed independently for every tenth day, with the exception of those for α and δ URSÆ MINORIS, which were interpolated, with second differences, from computations made for every third day of the year.

A further correction of the right ascension for *daily* aberration is necessary, where extreme accuracy is required, and may be computed as follows: Let ϕ denote the latitude of the place, and δ the declination of the Star, then the correction (*in time*) for the *upper* transit is,

$$+ 0^{s}\cdot0206 \cos\phi \sec\delta$$

and for the *lower* transit,

$$- 0^{s}\cdot0206 \cos\phi \sec\delta$$

The Lists of Moon-Culminating Stars and Occultations have been selected from the Catalogue of the British Association.

The mean Places of the Stars for both Lists were taken in order of preference, 1. From the Catalogue of the 100 Stars in this Work. 2. From AIRY's Greenwich Twelve-Year Catalogue of 2156† Stars. 3. From the Catalogue of the British Association. The reduction of the Mean to the Apparent Places has been performed by means of the Constants in the Catalogue of the British Association; the corrections for each star on the contiguous days being obtained by different computers for the Moon-Culminating List, and those for the Occultations by duplicate computations.

The calculations of the Elements of Occultations, the Occultations visible at Greenwich, and the Solar and Lunar Eclipses, have been made in the manner described by Mr. WOOLHOUSE in the APPENDIX to the NAUTICAL ALMANAC for 1836: those relating to the Occultations, in duplicate.

The Tides at London Bridge for the year 1855 have been computed from tables in "An Elementary Treatise on the Tides. By J. W. LUBBOCK, Esq." (London, 1839.)

The Tables for finding the Latitude of a place by Observations of the Pole Star (α URSÆ MINORIS), at any hour of the day, are founded on the following formula:

$$l = a - p\cos h + \tfrac{1}{2}\sin 1''\,(p\sin h)^{2}\tan a$$

where l denotes the latitude

a —— the true altitude of the Star

p —— the apparent polar distance, expressed in seconds of arc

h —— the hour angle of the Star $= S - \alpha$; S being the sidereal time of observation, and α the right ascension of the Star.

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* The Catalogue of Stars of the British Association for the Advancement of Science; containing the Mean Right Ascensions and North Polar Distances of eight thousand three hundred and seventy-seven Fixed Stars, reduced to January 1, 1850: together with their annual precessions, secular variations, and proper motions, as well as the logarithmic constants for computing precession, aberration, and nutation. With a Preface explanatory of their Construction and Application. By the late Francis Baily, Esq. London, 1845. 4to.

† Catalogue of 2156 Stars, formed from the Observations made during twelve years, from 1836 to 1847, at the Royal Observatory, Greenwich. London. 1849. 4to.

Table I contains the value of the *second* term ($p \cos h$) or the *first correction* assuming, as *mean* values, $p = 87' 30''$, and $\alpha = 16° 40'$.

Table II contains the value of the *third* term ($\frac{1}{2} \sin 1'' (p \sin h)^2 \tan \alpha$) or the *second correction*, using the same *mean* quantities as in Table I.

Table III, which is *special* for the year 1855, and depends upon the difference between the true and assumed values of p and α, contains the *third* correction increased by $1'$ for the purpose of rendering the quantities additive.

A fourth term ($-\frac{1}{3} \sin^2 1'' (p \cos h) (p \sin h)^2$) is omitted, its greatest value being less than half a second.

In the construction of this Ephemeris generally, duplicate computations have been made where necessary, and independent calculations performed to guard against error in principle, and all results admitting of such test finally examined by means of differences.

W. S. STRATFORD,
Superintendent of the Nautical Almanac.

Nautical Almanac Office,
3, Verulam Buildings, Gray's Inn, London.
March 18, 1852.

PRINCIPAL ARTICLES OF THE CALENDAR,
For the Year 1855.

Golden Number	13	Dominical Letter	G
Epact	12	Roman Indiction	13
Solar Cycle	16	Julian Period	6568

IXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c. &c.

piphany	Jan. 6	Birth of Q. Victoria	May 24
artyrdom of K. Charles I.	30	*Pentecost—Whit Sunday*	27
ptuagesima Sunday	Feb. 4	Restoration of K. Charles II.	29
uinquagesima—Shrove Sunday	18	*Trinity Sunday*	June 3
sh Wednesday	21	*Corpus Christi*	7
uadragesima—1st Sun. in Lent	25	Accession of Q. Victoria	20
. David	Mar. 1	Proclamation	21
. Patrick	17	St. John Bapt.—Midsum. Day	24
nnunciation—Lady Day	25	Birth of Prince Albert	Aug. 26
lm Sunday	April 1	St. Michael—Michaelmas Day	Sept. 29
ood Friday	6	Gunpowder Plot	Nov. 5
ASTER SUNDAY	8	Birth of Prince of Wales	9
w Sunday	15	St. Andrew	30
. George	23	*1st Sunday in Advent*	Dec. 2
gation Sunday	May 13	St. Thomas	21
cension Day—Holy Thursday	17	Christmas Day	25

The Year 5616 of the Jewish Era commences on September 13, 1855.
Ramadân (Month of Abstinence observed by the Turks) commences on May 18, 1855.
The Year 1272 of the Mohammedan Era commences on Sept. 13, 1855.

EXPLANATION OF
ASTRONOMICAL SYMBOLS AND ABBREVIATIONS

☉	The Sun.	⚳	Ceres.	″	Seconds of Arc.
☾	The Moon	⚴	Pallas.	h	Hours.
☿	Mercury.		Eunomia.	m	Minutes of Time.
♀	Venus.		Hygeia.	s	Seconds of Time.
⊖ or ♁	The Earth	♃	Jupiter.		
♂	Mars.	♄	Saturn.	o. ♈	Aries - -
⚘	Flora.	♅	Uranus.	I. ♉	Taurus - - 3
	Victoria.	♆	Neptune.	II. ♊	Gemini - 6
⚶	Vesta.	☌	Conjunction.	III. ♋	Cancer - - 9
⚵	Iris.	□	Quadrature.	IV. ♌	Leo - - - 12
⚷	Metis.	☍	Opposition.	V. ♍	Virgo - - 15
⚻	Hebe.	☊	Ascending Node.	VI. ♎	Libra - - 18
	Parthenope.	☋	Descending Node.	VII. ♏	Scorpio - 21
	Irene.	N.	North. S. South.	VIII. ♐	Sagittarius 24
⚸	Astræa.	E.	East. W. West.	IX. ♑	Capricornus 27
	Egeria.	°	Degrees.	X. ♒	Aquarius - 30
⚵	Juno.	′	Minutes of Arc.	XI. ♓	Pisces - - 33

LAW TERMS, 1855.

As settled by Statutes
11 GEO. IV. and 1 WILL. IV. cap. 70, s. 6. (Passed July 23, 1830.)
1 WILL. IV. - - - - - cap. 3, s. 2. (Passed Dec. 23, 1830.)

HILARY TERM - - -	*Begins* Jan. 11 - -	*Ends* Jan. 31
EASTER - - - - - - - - -	Apr. 15 - - - -	May 8
TRINITY - - - - - - - - -	May 22 - - - -	June 12
MICHAELMAS - - - - - -	Nov. 2 - - - -	Nov. 26

For Returns see Statute 1 WILL. IV. cap. 3, s. 2. (Passed Dec. 23, 1830.)

UNIVERSITY TERMS, 1855.

Terms.	OXFORD.		CAMBRIDGE.		
	Begins.	*Ends.*	*Begins.*	*Divides.*	*Ends.*
Lent - - - -	Jan. 15	Mar. 31	Jan. 13	Feb. 20, Noon.	Mar. 3
Easter - - -	April 18	May 26	April 18	May 27, Midnight.	July
Trinity - - -	May 30	July 7	- - -	- - - - - - -	- -
Michaelmas -	Oct. 10	Dec. 17	Oct. 10	Nov. 12, Midnight.	Dec. 1
	The Act, July 3.		*The Commencement*, July 3.		

ERRATA.

(*Continued from* page xv *of the Nautical Almanac for* 1854.)

NAUTICAL ALMANAC FOR THE YEAR, 1854.

Page ix. Vesta, mean daily Sidereal motion,
for 997·79182 *read* 977·79182

CARLINI'S NEW TABLES OF THE SUN.

(*Effemeridi Astronomiche di Milano per l'Anno* 1833. *Milano*, 1832.)

Page 18	A for	1845,	*for*	0·70192	*read* 1·70192
—	—	1849,	—	0·66369	— 1·66369
—	—	1853,	—	0·62546	— 1·62546
19	—	1877,	—	0·39608	— 1·39608

EPHEMERIS

FOR THE YEAR

1855,

FOR THE MERIDIAN

OF THE

ROYAL OBSERVATORY AT GREENWICH.

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time, of the Semidiam. passing the Meridian.*	Equation of Time, *to be added to Apparent Time.*	Diff. for 1 hour
		h m s	s	° ′ ″	″	m s	m s	s
Mon.	1	18 46 1·50	11·035	S. 23 2 16·4	12·72	1 11·09	3 43·63	1·176
Tues.	2	18 50 26·35	11·020	22 57 11·1	13·87	1 11·04	4 11·85	1·161
Wed.	3	18 54 50·84	11·005	22 51 38·4	15·00	1 10·99	4 39·72	1·145
Thur.	4	18 59 14·96	10·988	22 45 38·4	16·12	1 10·94	5 7·20	1·128
Frid.	5	19 3 38·67	10·970	22 39 11·4	17·24	1 10·88	5 34·27	1·111
Sat.	6	19 8 1·95	10·951	22 32 17 5	18·36	1 10·82	6 0·92	1·092
Sun.	7	19 12 24·77	10·931	22 24 56·9	19·46	1 10·76	6 27·12	1·072
Mon.	8	19 16 47·12	10·910	22 17 9·8	20·56	1 10·69	6 52·83	1·051
Tues.	9	19 21 8·96	10·888	22 8 56·5	21·64	1 10·61	7 18·05	1·029
Wed.	10	19 25 30·27	10·866	22 0 17·1	22·72	1 10·54	7 42·74	1·006
Thur.	11	19 29 51·05	10·841	21 51 11·9	23·78	1 10·46	8 6·88	0·983
Frid.	12	19 34 11·24	10·817	21 41 41·2	24·84	1 10·37	8 30·45	0·958
Sat.	13	19 38 30·84	10·790	21 31 45·3	25·88	1 10·29	8 53·43	0·932
Sun.	14	19 42 49·81	10·764	21 21 24·3	26·91	1 10·20	9 15·78	0·905
Mon.	15	19 47 8·15	10·736	21 10 38·6	27·92	1 10·11	9 37·50	0·878
Tues.	16	19 51 25·81	10·708	20 59 28·6	28·92	1 10·02	9 58·55	0·849
Wed.	17	19 55 42·79	10·678	20 47 54·4	29·91	1 9·92	10 18·92	0·819
Thur.	18	19 59 59·06	10·647	20 35 56·5	30·89	1 9·82	10 38·57	0·789
Frid.	19	20 4 14·59	10·616	20 23 35·1	31·85	1 9·72	10 57·50	0·758
Sat.	20	20 8 29·38	10·584	20 10 50·7	32·80	1 9·62	11 15·68	0·726
Sun.	21	20 12 43·41	10·552	19 57 43·6	33·73	1 9·51	11 33·10	0·693
Mon.	22	20 16 56·66	10·519	19 44 14·2	34·64	1 9·41	11 49·75	0·660
Tues.	23	20 21 9·11	10·485	19 30 22·8	35·54	1 9·30	12 5·60	0·627
Wed.	24	20 25 20·75	10·451	19 16 9·8	36·42	1 9·19	12 20·64	0·593
Thur.	25	20 29 31·58	10·417	19 1 35·7	37·29	1 9·08	12 34·88	0·559
Frid.	26	20 33 41·59	10·382	18 46 40·7	38·14	1 8·97	12 48·29	0·525
Sat.	27	20 37 50·77	10·348	18 31 25·3	38·98	1 8·86	13 0·88	0·490
Sun.	28	20 41 59·12	10·312	18 15 49·9	39·79	1 8·75	13 12·64	0·455
Mon.	29	20 46 6·62	10·278	17 59 54·9	40·59	1 8·63	13 23·56	0·420
Tues.	30	20 50 13·29	10·243	17 43 40·7	41·37	1 8·52	13 33·65	0·385
Wed.	31	20 54 19·13	10·208	17 27 7·7	42·14	1 8·40	13 [illegible]	0·351
Thur.	32	20 58 24·13		S. 17 10 16·2		1 8·29	--	

* *Mean* Time of the Semidiameter passing may be found by subtracting [illegible]

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	Semidiam.*	Equation of Time, *to be subtracted from Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
on.	1	18 46 0·81	S. 23 2 17·2	16 18·3	3 43·56	18 42 17·25
ues.	2	18 50 25·58	22 57 12·0	16 18·3	4 11·77	18 46 13·81
ed.	3	18 54 49·99	22 51 39·5	16 18·2	4 39·63	18 50 10·36
hur.	4	18 59 14·02	22 45 39·8	16 18·2	5 7·10	18 54 6·92
id.	5	19 3 37·65	22 39 13·0	16 18·2	5 34·17	18 58 3·48
t.	6	19 8 0·85	22 32 19·3	16 18·2	6 0·81	19 2 0·04
un.	7	19 12 23·60	22 24 59·0	16 18·2	6 27·00	19 5 56·60
on.	8	19 16 45·87	22 17 12·2	16 18·1	6 52·71	19 9 53·16
ues.	9	19 21 7·64	22 8 59·1	16 18·1	7 17·93	19 13 49·71
ed.	10	19 25 28·88	22 0 20·0	16 18·0	7 42·61	19 17 46·27
hur.	11	19 29 49·58	21 51 15·2	16 18·0	8 6·75	19 21 42·83
id.	12	19 34 9·71	21 41 44·8	16 17·9	8 30·32	19 25 39·39
t.	13	19 38 29·24	21 31 49·1	16 17·8	8 53·29	19 29 35·95
un.	14	19 42 48·15	21 21 28·4	16 17·8	9 15·64	19 33 32·51
on.	15	19 47 6·42	21 10 43·1	16 17·7	9 37·36	19 37 29·06
ues.	16	19 51 24·03	20 59 33·4	16 17·6	9 58·41	19 41 25·62
ed.	17	19 55 40·96	20 47 59·5	16 17·6	10 18·78	19 45 22·18
hur.	18	19 59 57·17	20 36 1·9	16 17·5	10 38·43	19 49 18·74
id.	19	20 4 12·66	20 23 40·9	16 17·4	10 57·36	19 53 15·30
t.	20	20 8 27·40	20 10 56·9	16 17·3	11 15·54	19 57 11·86
un.	21	20 12 41·38	19 57 50·1	16 17·2	11 32·97	20 1 8·41
on.	22	20 16 54·59	19 44 21·0	16 17·1	11 49·62	20 5 4·97
ues.	23	20 21 7·00	19 30 29·9	16 17·0	12 5·47	20 9 1·53
ed.	24	20 25 18·60	19 16 17·3	16 16·9	12 20·51	20 12 58·09
hur.	25	20 29 29·40	19 1 43·5	16 16·8	12 34·76	20 16 54·64
id.	26	20 33 39·37	18 46 48·8	16 16·7	12 48·17	20 20 51·20
t.	27	20 37 48·52	18 31 33·8	16 16·5	13 0·77	20 24 47·75
un.	28	20 41 56·85	18 15 58·7	16 16·4	13 12·54	20 28 44·31
on.	29	20 46 4·33	18 0 4·0	16 16·3	13 23·46	20 32 40·87
ues.	30	20 50 10·98	17 43 50·1	16 16·2	13 33·56	20 36 37·42
ed.	31	20 54 16·79	17 27 17·3	16 16·0	13 42·81	20 40 33·98
hur.	32	20 58 21·78	S. 17 10 26·1	16 15·9	13 51·24	20 44 30·54

*emidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax. *Noon.*	THE MOON'S Horizontal Parallax. *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	280 34 29·6	N.0·10	9·9926434	14 55·6	14 53·1	54 40·1	54 30·9
2	281 35 38·2	0·22	9·9926437	14 50·9	14 49·0	54 22·9	54 16·0
3	282 36 46·7	0·31	9·9926468	14 47·4	14 46·2	54 10·4	54 5·9
4	283 37 55·1	0·38	9·9926528	14 45·3	14 44·8	54 2·7	54 0·7
5	284 39 3·5	0·42	9·9926618	14 44·6	14 44·9	54 0·1	54 1·0
6	285 40 11·8	0·43	9·9926736	14 45·6	14 46·7	54 3·5	54 7·7
7	286 41 20·1	0·42	9·9926881	14 48·3	14 50·5	54 13·6	54 21·6
8	287 42 28·4	0·37	9·9927052	14 53·1	14 56·4	54 31·4	54 43·3
9	288 43 36·6	0·28	9·9927248	15 0·3	15 4·7	54 57·3	55 13·7
10	289 44 44·8	0·18	9·9927469	15 9·8	15 15·5	55 32·4	55 53·2
11	290 45 53·1	N.0·06	9·9927713	15 21·8	15 28·6	56 16·2	56 41·0
12	291 47 1·2	S.0·07	9·9927977	15 35·8	15 43·4	57 7·5	57 35·3
13	292 48 9·2	0·20	9·9928262	15 51·3	15 59·3	58 4·4	58 33·7
14	293 49 16·9	0·34	9·9928567	16 7·3	16 15·0	59 2·8	59 31·2
15	294 50 24·4	0·46	9·9928889	16 22·3	16 29·0	59 57·9	60 22·3
16	295 51 31·4	0·58	9·9929229	16 34·8	16 39·6	60 43·6	61 1·2
17	296 52 38·0	0·66	9·9929583	16 43·2	16 45·5	61 14·5	61 22·9
18	297 53 44·0	0·72	9·9929953	16 46·5	16 46·0	61 26·3	61 24·4
19	298 54 49·4	0·75	9·9930339	16 44·1	16 41·0	61 17·6	61 6·1
20	299 55 54·0	0·75	9·9930741	16 36·6	16 31·2	60 50·3	60 30·5
21	300 56 57·7	0·72	9·9931160	16 25·0	16 18·1	60 7·7	59 42·4
22	301 58 0·6	0·66	9·9931595	16 10·8	16 3·2	59 15·5	58 47·7
23	302 59 2·4	0·57	9·9932046	15 55·4	15 47·9	58 19·5	57 51·6
24	304 0 3·1	0·46	9·9932516	15 40·4	15 33·3	57 24·5	56 58·5
25	305 1 2·7	0·34	9·9933005	15 26·6	15 20·4	56 34·0	56 11·1
26	306 2 1·1	0·21	9·9933515	15 14·7	15 9·5	55 50·1	55 31·1
27	307 2 58·4	S.0·07	9·9934046	15 4·8	15 0·6	55 13·9	54 58·7
28	308 3 54·4	N.0·06	9·9934599	14 57·0	14 53·9	54 45·3	54 34·0
29	309 4 49·1	0·17	9·9935177	14 51·3	14 49·0	54 24·3	54 16·2
30	310 5 42·6	0·26	9·9935779	14 47·3	14 45·9	54 9·7	54 4·7
31	311 6 35·0	0·34	9·9936405	14 44·9	14 44·3	54 1·2	53 59·0
32	312 7 26·1	N.0·38	9·9937055	14 44·1	14 44·2	53 58·1	53 58·6

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
on.	1	80 15 29·2	86 17 58·3	N. 2 28 58·8	N. 2 56 24·1	12·6	10 57·1
ues.	2	92 19 1·2	98 18 48·9	3 21 42·1	3 44 38·5	13·6	11 48·7
ed.	3	104 17 31·8	110 15 19·5	4 4 59·5	4 22 34·5	14·6	12 39·8
hur.	4	116 12 22·0	122 8 49·1	4 37 14·1	4 48 50·5	15·6	13 29·2
id.	5	128 4 52·7	134 0 45·1	4 57 17·8	5 2 31·5	16·6	14 16·4
at.	6	139 56 40·6	145 52 56·0	5 4 28·8	5 3 8·9	17·6	15 1·1
un.	7	151 49 49·9	157 47 43·6	4 58 31·2	4 50 37·5	18·6	15 43·7
on.	8	163 47 1·4	169 48 9·4	4 39 30·4	4 25 13·9	19·6	16 25·0
ues.	9	175 51 36·8	181 57 54·6	4 7 53·1	3 47 34·3	20·6	17 5·9
ed.	10	188 7 36·0	194 21 15·3	3 24 25·4	2 58 36·0	21·6	17 47·6
hur.	11	200 39 27·5	207 2 47·5	2 30 17·5	1 59 43·4	22·6	18 31·4
id.	12	213 31 49·1	220 7 4·2	1 27 10·3	N. 0 52 57·2	23·6	19 18·7
at.	13	226 49 0·3	233 37 59·5	N. 0 17 27·2	S. 0 18 53·8	24·6	20 10·8
un.	14	240 34 16·9	247 37 58·0	S. 0 55 34·6	1 32 1·1	25·6	21 8·6
on.	15	254 48 57·4	262 6 56·5	2 7 35·2	2 41 36·3	26·6	22 11·7
ues.	16	269 31 23·0	277 1 29·9	3 13 21·8	3 42 9·1	27·6	23 18·2
ed.	17	284 36 16·0	292 14 28·3	4 7 17·8	4 28 11·4	28·6	♂
hur.	18	299 54 43·6	307 35 32·8	4 44 19·7	4 55 20·1	0·1	0 24·5
id.	19	315 15 25·2	322 52 53·3	5 0 59·8	5 1 15·6	1·1	1 27·5
at.	20	330 26 35·5	337 55 21·6	4 56 13·5	4 46 8·5	2·1	2 25·5
un.	21	345 18 13·8	352 34 29·2	4 31 22·6	4 12 23·5	3·1	3 18·7
on.	22	359 43 38·9	6 45 28·0	3 49 42·4	3 23 52·3	4·1	4 8·0
ues.	23	13 39 54·9	20 27 8·1	2 55 27·2	2 25 0·2	5·1	4 55·0
ed.	24	27 7 25·2	33 41 10·5	1 53 2·9	1 20 5·7	6·1	5 41·0
hur.	25	40 8 53·6	46 31 7·4	S. 0 46 35·9	S. 0 12 59·7	7·1	6 27·1
id.	26	52 48 26·5	59 1 25·9	N. 0 20 19·4	N. 0 52 59·8	8·1	7 14·3
at.	27	65 10 40·9	71 16 44·9	1 24 41·7	1 55 6·6	9·1	8 3·1
un.	28	77 20 9·7	83 21 24·6	2 23 57·5	2 50 58·6	10·1	8 53·3
on.	29	89 20 56·7	95 19 9·8	3 15 56·2	3 38 36·3	11·1	9 44·5
ues.	30	101 16 25·3	107 13 1·4	3 58 47·0	4 16 17·2	12·1	10 35·6
ed.	31	113 9 14·2	119 5 17·1	4 30 57·7	4 42 39·9	13·1	11 25·6
hur.	32	125 1 21·7	130 57 38·2	N. 4 51 16·7	N. 4 56 43·3	14·1	12 13·5

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 1.		
	h m s	° ′ ″	″
0	5 16 47·48	N.25 34 40·5	45·55
1	5 19 0·50	25 39 13·8	44·27
2	5 21 13·63	25 43 39·4	43·00
3	5 23 26·86	25 47 57·4	41·68
4	5 25 40·20	25 52 7·5	40·42
5	5 27 53·63	25 56 10·0	39·12
6	5 30 7·16	26 0 4·7	37·80
7	5 32 20·78	26 3 51·5	36·52
8	5 34 34·48	26 7 30·6	35·22
9	5 36 48·27	26 11 1·9	33·90
10	5 39 2·13	26 14 25·3	32·58
11	5 41 16·07	26 17 40·8	31·28
12	5 43 30·08	26 20 48·5	29·97
13	5 45 44·15	26 23 48·3	28·65
14	5 47 58·29	26 26 40·2	27·33
15	5 50 12·48	26 29 24·2	26·00
16	5 52 26·72	26 32 0·2	24·68
17	5 54 41·01	26 34 28·3	23·37
18	5 56 55·34	26 36 48·5	22·03
19	5 59 9·71	26 39 0·7	20·72
20	6 1 24·12	26 41 5·0	19·37
21	6 3 38·55	26 43 1·2	18·05
22	6 5 53·00	26 44 49·5	16·73
23	6 8 7·48	N.26 46 29·9	15·38
	TUESDAY 2.		
0	6 10 21·97	N.26 48 2·2	14·05
1	6 12 36·47	26 49 26·5	12·73
2	6 14 50·98	26 50 42·9	11·40
3	6 17 5·48	26 51 51·3	10·05
4	6 19 19·99	26 52 51·6	8·73
5	6 21 34·48	26 53 44·0	7·38
6	6 23 48·96	26 54 28·3	6·07
7	6 26 3·42	26 55 4·7	4·73
8	6 28 17·86	26 55 33·1	3·40
9	6 30 32·27	26 55 53·5	2·07
10	6 32 46·64	26 56 5·9	0·73
11	6 35 0·98	26 56 10·3	0·60
12	6 37 15·27	26 56 6·7	1·92
13	6 39 29·52	26 55 55·2	3·25
14	6 41 43·71	26 55 35·7	4·58
15	6 43 57·84	26 55 8·2	5·90
16	6 46 11·91	26 54 32·8	7·22
17	6 48 25·92	26 53 49·5	8·53
18	6 50 39·85	26 52 58·3	9·85
19	6 52 53·71	26 51 59·2	11·17
20	6 55 7·49	26 50 52·2	12·47
21	6 57 21·18	26 49 37·4	13·78
22	6 59 34·78	26 48 14·7	15·10
23	7 1 48·28	26 46 44·1	16·38
24	7 4 1·68	N.26 45 5·8	

Hour.	Right Ascension.	Declination.	Diff. D for 10
	WEDNESDAY 3.		
	h m s	° ′ ″	″
0	7 4 1·68	N.26 45 5·8	17·6
1	7 6 14·98	26 43 19·7	18·9
2	7 8 28·17	26 41 25·8	20·2
3	7 10 41·25	26 39 24·1	21·5
4	7 12 54·21	26 37 14·8	22·8
5	7 15 7·05	26 34 57·7	24·1
6	7 17 19·77	26 32 32·9	25·4
7	7 19 32·35	26 30 0·5	26·6
8	7 21 44·80	26 27 20·5	27·9
9	7 23 57·11	26 24 32·8	29·2
10	7 26 9·28	26 21 37·6	30·4
11	7 28 21·31	26 18 34·8	31·7
12	7 30 33·18	26 15 24·5	32·9
13	7 32 44·90	26 12 6·7	34·2
14	7 34 56·47	26 8 41·4	35·4
15	7 37 7·87	26 5 8·7	36·6
16	7 39 19·11	26 1 28·7	37·9
17	7 41 30·17	25 57 41·2	39·1
18	7 43 41·07	25 53 46·4	40·3
19	7 45 51·79	25 49 44·3	41·5
20	7 48 2·34	25 45 34·9	42·7
21	7 50 12·70	25 41 18·3	43·9
22	7 52 22·88	25 36 54·5	45·1
23	7 54 32·87	N.25 32 23·5	46·3
	THURSDAY 4.		
0	7 56 42·67	N.25 27 45·4	47·5
1	7 58 52·28	25 23 0·2	48·7
2	8 1 1·69	25 18 7·9	49·8
3	8 3 10·90	25 13 8·7	51·0
4	8 5 19·90	25 8 2·4	52·2
5	8 7 28·71	25 2 49·2	53·3
6	8 9 37·31	24 57 29·2	54·5
7	8 11 45·70	24 52 2·2	55·6
8	8 13 53·87	24 46 28·4	56·7
9	8 16 1·84	24 40 47·9	57·8
10	8 18 9·59	24 35 0·6	59·0
11	8 20 17·12	24 29 6·6	60·1
12	8 22 24·43	24 23 6·0	61·2
13	8 24 31·52	24 16 58·8	62·3
14	8 26 38·39	24 10 45·0	63·4
15	8 28 45·04	24 4 24·6	64·4
16	8 30 51·46	23 57 57·8	65·5
17	8 32 57·66	23 51 24·6	66·6
18	8 35 3·62	23 44 44·9	67·6
19	8 37 9·36	23 37 58·9	68·7
20	8 39 14·86	23 31 6·7	69·7
21	8 41 20·13	23 24 8·1	70·7
22	8 43 25·17	23 17 3·4	71·8
23	8 45 29·98	23 9 52·5	72·8
24	8 47 34·55	N.23 2 35·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 5.		
	h m s	° ′ ″	″
0	8 47 34·55	N.23 2 35·4	73·85
1	8 49 38·89	22 55 12·3	74·87
2	8 51 42·99	22 47 43·1	75·85
3	8 53 46·85	22 40 8·0	76·83
4	8 55 50·48	22 32 27·0	77·82
5	8 57 53·87	22 24 40·1	78·80
6	8 59 57·02	22 16 47·3	79·77
7	9 1 59·93	22 8 48·7	80·72
8	9 4 2·61	22 0 44·4	81·67
9	9 6 5·04	21 52 34·4	82·62
10	9 8 7·24	21 44 18·7	83·55
11	9 10 9·21	21 35 57·4	84·47
12	9 12 10·93	21 27 30·6	85·38
13	9 14 12·42	21 18 58·3	86·32
14	9 16 13·67	21 10 20·4	87·20
15	9 18 14·68	21 1 37·2	88·10
16	9 20 15·46	20 52 48·6	88·98
17	9 22 16·01	20 43 54·7	89·87
18	9 24 16·32	20 34 55·5	90·73
19	9 26 16·39	20 25 51·1	91·60
20	9 28 16·24	20 16 41·5	92·45
21	9 30 15·85	20 7 26·8	93·30
22	9 32 15·23	19 58 7·0	94·13
23	9 34 14·39	N.19 48 42·2	94·97
	SATURDAY 6.		
0	9 36 13·31	N.19 39 12·4	95·80
1	9 38 12·01	19 29 37·6	96·60
2	9 40 10·48	19 19 58·0	97·40
3	9 42 8·73	19 10 13·6	98·22
4	9 44 6·76	19 0 24·3	99·00
5	9 46 4·56	18 50 30·3	99·78
6	9 48 2·14	18 40 31·6	100·57
7	9 49 59·51	18 30 28·2	101·33
8	9 51 56·66	18 20 20·2	102·08
9	9 53 53·60	18 10 7·7	102·83
10	9 55 50·32	17 59 50·7	103·58
11	9 57 46·83	17 49 29·2	104·33
12	9 59 43·14	17 39 3·2	105·05
13	10 1 39·24	17 28 32·9	105·78
14	10 3 35·13	17 17 58·2	106·48
15	10 5 30·82	17 7 19·3	107·20
16	10 7 26·31	16 56 36·1	107·90
17	10 9 21·60	16 45 48·7	108·58
18	10 11 16·70	16 34 57·2	109·27
19	10 13 11·60	16 24 1·6	109·95
20	10 15 6·31	16 13 1·9	110·62
21	10 17 0·83	16 1 58·2	111·27
22	10 18 55·17	15 50 50·6	111·93
23	10 20 49·32	15 39 39·0	112·57
24	10 22 43·28	N.15 28 23·6	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 7.		
	h m s	° ′ ″	″
0	10 22 43·28	N.15 28 23·6	113·22
1	10 24 37·07	15 17 4·3	113·83
2	10 26 30·69	15 5 41·3	114·47
3	10 28 24·14	14 54 14·5	115·08
4	10 30 17·42	14 42 44·0	115·68
5	10 32 10·53	14 31 9·9	116·28
6	10 34 3·47	14 19 32·2	116·88
7	10 35 56·26	14 7 50·9	117·47
8	10 37 48·89	13 56 6·1	118·05
9	10 39 41·36	13 44 17·8	118·62
10	10 41 33·68	13 32 26·1	119·18
11	10 43 25·85	13 20 31·0	119·75
12	10 45 17·87	13 8 32·5	120·30
13	10 47 9·75	12 56 30·7	120·83
14	10 49 1·50	12 44 25·7	121·37
15	10 50 53·11	12 32 17·5	121·90
16	10 52 44·59	12 20 6·1	122·43
17	10 54 35·94	12 7 51·5	122·93
18	10 56 27·16	11 55 33·9	123·45
19	10 58 18·26	11 43 13·2	123·95
20	11 0 9·24	11 30 49·5	124·45
21	11 2 0·10	11 18 22·8	124·92
22	11 3 50·86	11 5 53·3	125·42
23	11 5 41·50	N.10 53 20·8	125·88
	MONDAY 8.		
0	11 7 32·04	N.10 40 45·5	126·35
1	11 9 22·48	10 28 7·4	126·82
2	11 11 12·82	10 15 26·5	127·25
3	11 13 3·07	10 2 43·0	127·72
4	11 14 53·23	9 49 56·7	128·13
5	11 16 43·31	9 37 7·9	128·58
6	11 18 33·30	9 24 16·4	129·00
7	11 20 23·22	9 11 22·4	129·42
8	11 22 13·06	8 58 25·9	129·83
9	11 24 2·83	8 45 26·9	130·25
10	11 25 52·53	8 32 25·4	130·63
11	11 27 42·18	8 19 21·6	131·02
12	11 29 31·76	8 6 15·5	131·40
13	11 31 21·29	7 53 7·1	131·80
14	11 33 10·77	7 39 56·3	132·15
15	11 35 0·20	7 26 43·4	132·52
16	11 36 49·59	7 13 28·3	132·88
17	11 38 38·94	7 0 11·0	133·22
18	11 40 28·26	6 46 51·7	133·57
19	11 42 17·55	6 33 30·3	133·92
20	11 44 6·82	6 20 6·8	134·23
21	11 45 56·06	6 6 41·4	134·55
22	11 47 45·28	5 53 14·1	134·88
23	11 49 34·49	5 39 44·8	135·18
24	11 51 23·69	N. 5 26 13·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 9.		
	h m s	° ′ ″	″
0	11 51 23·69	N. 5 26 13·7	135·48
1	11 53 12·89	5 12 40·8	135·78
2	11 55 2·09	4 59 6·1	136·08
3	11 56 51·29	4 45 29·6	136·35
4	11 58 40·50	4 31 51·5	136·63
5	12 0 29·73	4 18 11·7	136·90
6	12 2 18·98	4 4 30·3	137·17
7	12 4 8·25	3 50 47·3	137·42
8	12 5 57·54	3 37 2·8	137·65
9	12 7 46·87	3 23 16·9	137·92
10	12 9 36·23	3 9 29·4	138·13
11	12 11 25·63	2 55 40·6	138·37
12	12 13 15·07	2 41 50·4	138·58
13	12 15 4·57	2 27 58·9	138·80
14	12 16 54·12	2 14 6·1	139·00
15	12 18 43·73	2 0 12·1	139·20
16	12 20 33·41	1 46 16·9	139·40
17	12 22 23·15	1 32 20·5	139·58
18	12 24 12·97	1 18 23·0	139·75
19	12 26 2·87	1 4 24·5	139·92
20	12 27 52·85	0 50 25·0	140·08
21	12 29 42·92	0 36 24·5	140·25
22	12 31 33·08	0 22 23·0	140·38
23	12 33 23·33	N. 0 8 20·7	140·53
	WEDNESDAY 10.		
0	12 35 13·69	S. 0 5 42·5	140·66
1	12 37 4·16	0 19 46·5	140·78
2	12 38 54·74	0 33 51·2	140·90
3	12 40 45·43	0 47 56·6	141·00
4	12 42 36·25	1 2 2·6	141·12
5	12 44 27·19	1 16 9·3	141·20
6	12 46 18·27	1 30 16·5	141·30
7	12 48 9·49	1 44 24·3	141·37
8	12 50 0·84	1 58 32·5	141·43
9	12 51 52·34	2 12 41·1	141·50
10	12 53 44·00	2 26 50·1	141·55
11	12 55 35·82	2 40 59·4	141·60
12	12 57 27·79	2 55 9·0	141·63
13	12 59 19·94	3 9 18·8	141·67
14	13 1 12·26	3 23 28·8	141·68
15	13 3 4·75	3 37 38·9	141·68
16	13 4 57·43	3 51 49·0	141·70
17	13 6 50·29	4 5 59·2	141·70
18	13 8 43·35	4 20 9·4	141·67
19	13 10 36·61	4 34 19·4	141·65
20	13 12 30·08	4 48 29·3	141·62
21	13 14 23·75	5 2 39·0	141·58
22	13 16 17·64	5 16 48·5	141·53
23	13 18 11·74	5 30 57·7	141·47
24	13 20 6·08	S. 5 45 6·5	

Hour.	Right Ascension.	Declination.	Diff. D for 1
	THURSDAY 11.		
	h m s	° ′ ″	″
0	13 20 6·08	S. 5 45 6·5	141·
1	13 22 0·64	5 59 14·9	141·
2	13 23 55·44	6 13 22·8	141·
3	13 25 50·48	6 27 30·2	141·
4	13 27 45·76	6 41 37·0	141·
5	13 29 41·30	6 55 43·1	140·
6	13 31 37·10	7 9 48·6	140·
7	13 33 33·16	7 23 53·2	140·
8	13 35 29·48	7 37 57·0	140·
9	13 37 26·08	7 52 0·0	140·
10	13 39 22·96	8 6 2·0	140·
11	13 41 20·13	8 20 2·9	139·
12	13 43 17·58	8 34 2·8	139·
13	13 45 15·33	8 48 1·5	139·
14	13 47 13·38	9 1 59·0	139·
15	13 49 11·73	9 15 55·3	139·
16	13 51 10·39	9 29 50·1	138·
17	13 53 9·38	9 43 43·6	138·
18	13 55 8·69	9 57 35·6	138·
19	13 57 8·32	10 11 26·0	138·
20	13 59 8·28	10 25 14·8	137·
21	14 1 8·59	10 39 2·0	137·
22	14 3 9·24	10 52 47·3	137·
23	14 5 10·23	S.11 6 30·8	136·
	FRIDAY 12.		
0	14 7 11·59	S.11 20 12·4	136·
1	14 9 13·30	11 33 52·0	136·
2	14 11 15·38	11 47 29·6	135·
3	14 13 17·83	12 1 5·0	135·
4	14 15 20·65	12 14 38·2	135·
5	14 17 23·86	12 28 9·1	134·
6	14 19 27·45	12 41 37·6	134·
7	14 21 31·43	12 55 3·6	133·
8	14 23 35·81	13 8 27·1	133·
9	14 25 40·59	13 21 48·0	133·
10	14 27 45·78	13 35 6·1	132·
11	14 29 51·38	13 48 21·5	132·
12	14 31 57·39	14 1 34·0	131·
13	14 34 3·83	14 14 43·5	131·
14	14 36 10·69	14 27 50·0	130·
15	14 38 17·99	14 40 53·3	130·
16	14 40 25·72	14 53 53·3	129·
17	14 42 33·90	15 6 50·1	128·
18	14 44 42·52	15 19 43·4	128·
19	14 46 51·59	15 32 33·3	127·
20	14 49 1·12	15 45 19·5	127·
21	14 51 11·11	15 58 2·0	126·
22	14 53 21·56	16 10 40·7	125·
23	14 55 32·48	16 23 15·6	125·
24	14 57 43·87	S.16 35 46·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 13.				*MONDAY* 15.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	14 57 43·87	S.16 35 46·4	124·47	0	16 53 1·16	S.24 42 26·0	69·63
1	14 59 55·74	16 48 13·2	123·77	1	16 55 38·23	24 49 23·8	68·00
2	15 2 8·09	17 0 35·8	123·05	2	16 58 15·78	24 56 11·8	66·35
3	15 4 20·92	17 12 54·1	122·32	3	17 0 53·83	25 2 49·9	64·67
4	15 6 34·25	17 25 8·0	121·57	4	17 3 32·35	25 9 17·9	63·00
5	15 8 48·07	17 37 17·4	120·80	5	17 6 11·35	25 15 35·9	61·28
6	15 11 2·38	17 49 22·2	120·02	6	17 8 50·81	25 21 43·6	59·55
7	15 13 17·20	18 1 22·3	119·22	7	17 11 30·74	25 27 40·9	57·83
8	15 15 32·52	18 13 17·6	118·40	8	17 14 11·12	25 33 27·9	56·05
9	15 17 48·35	18 25 8·0	117·55	9	17 16 51·94	25 39 4·2	54·28
10	15 20 4·69	18 36 53·3	116·70	10	17 19 33·21	25 44 29·9	52·48
11	15 22 21·55	18 48 33·5	115·83	11	17 22 14·90	25 49 44·8	50·67
12	15 24 38·92	19 0 8·5	114·93	12	17 24 57·01	25 54 48·8	48·85
13	15 26 56·82	19 11 38·1	114·02	13	17 27 39·55	25 59 41·9	46·98
14	15 29 15·23	19 23 2·2	113·10	14	17 30 22·49	26 4 23·8	45·13
15	15 31 34·18	19 34 20·8	112·13	15	17 33 5·82	26 8 54·6	43·25
16	15 33 53·65	19 45 33·6	111·17	16	17 35 49·55	26 13 14·1	41·37
17	15 36 13·65	19 56 40·6	110·18	17	17 38 33·65	26 17 22·3	39·45
18	15 38 34·19	20 7 41·7	109·18	18	17 41 18·12	26 21 19·0	37·53
19	15 40 55·26	20 18 36·8	108·15	19	17 44 2·95	26 25 4·2	35·58
20	15 43 16·87	20 29 25·7	107·10	20	17 46 48·13	26 28 37·7	33·63
21	15 45 39·02	20 40 8·3	106·03	21	17 49 33·64	26 31 59·5	31·68
22	15 48 1·70	20 50 44·5	104·95	22	17 52 19·48	26 35 9·6	29·70
23	15 50 24·93	S.21 1 14·2	103·85	23	17 55 5·63	S.26 38 7·8	27·70
	SUNDAY 14.				*TUESDAY* 16.		
0	15 52 48·69	S.21 11 37·3	102·72	0	17 57 52·09	S.26 40 54·0	25·70
1	15 55 13·00	21 21 53·6	101·58	1	18 0 38·85	26 43 28·2	23·68
2	15 57 37·86	21 32 3·1	100·42	2	18 3 25·88	26 45 50·3	21·67
3	16 0 3·26	21 42 5·6	99·22	3	18 6 13·19	26 48 0·3	19·62
4	16 2 29·21	21 52 0·9	98·02	4	18 9 0·75	26 49 58·0	17·58
5	16 4 55·70	22 1 49·0	96·80	5	18 11 48·56	26 51 43·5	15·52
6	16 7 22·74	22 11 29·8	95·55	6	18 14 36·60	26 53 16·6	13·47
7	16 9 50·32	22 21 3·1	94·27	7	18 17 24·86	26 54 37·4	11·38
8	16 12 18·45	22 30 28·7	93·00	8	18 20 13·32	26 55 45·7	9·30
9	16 14 47·12	22 39 46·7	91·68	9	18 23 1·98	26 56 41·5	7·22
10	16 17 16·33	22 48 56·8	90·35	10	18 25 50·82	26 57 24·8	5·13
11	16 19 46·08	22 57 58·9	89·02	11	18 28 39·83	26 57 55·6	3·02
12	16 22 16·37	23 6 53·0	87·65	12	18 31 29·00	26 58 13·7	0·92
13	16 24 47·21	23 15 38·9	86·25	13	18 34 18·31	26 58 19·2	1·22
14	16 27 18·58	23 24 16·4	84·83	14	18 37 7·74	26 58 11·9	3·32
15	16 29 50·48	23 32 45·4	83·42	15	18 39 57·28	26 57 52·0	5·43
16	16 32 22·92	23 41 5·9	81·95	16	18 42 46·93	26 57 19·4	7·57
17	16 34 55·89	23 49 17·6	80·50	17	18 45 36·66	26 56 34·0	9·68
18	16 37 29·38	23 57 20·6	78·98	18	18 48 26·46	26 55 35·9	11·82
19	16 40 3·40	24 5 14·5	77·48	19	18 51 16·32	26 54 25·0	13·95
20	16 42 37·93	24 12 59·4	75·97	20	18 54 6·23	26 53 1·3	16·08
21	16 45 12·98	24 20 35·2	74·40	21	18 56 56·17	26 51 24·8	18·22
22	16 47 48·54	24 28 1·6	72·83	22	18 59 46·12	26 49 35·5	20·33
23	16 50 24·60	24 35 18·6	71·23	23	19 2 36·08	26 47 33·5	22·47
24	16 53 1·	26·0		24	19 5 26·03	S.26 45 18·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 17.		
	h m s	° ′ ″	″
0	19 5 26·03	S. 26 45 18·7	24·60
1	19 8 15·95	26 42 51·1	26·73
2	19 11 5·84	26 40 10·7	28·85
3	19 13 55·68	26 37 17·6	30·97
4	19 16 45·44	26 34 11·8	33·07
5	19 19 35·13	26 30 53·4	35·20
6	19 22 24·73	26 27 22·2	37·28
7	19 25 14·22	26 23 38·5	39·40
8	19 28 3·60	26 19 42·1	41·48
9	19 30 52·84	26 15 33·2	43·57
10	19 33 41·94	26 11 11·8	45·63
11	19 36 30·88	26 6 38·0	47·72
12	19 39 19·65	26 1 51·7	49·77
13	19 42 8·24	25 56 53·1	51·83
14	19 44 56·63	25 51 42·1	53·85
15	19 47 44·81	25 46 19·0	55·88
16	19 50 32·77	25 40 43·7	57·92
17	19 53 20·51	25 34 56·2	59·90
18	19 56 8·00	25 28 56·8	61·90
19	19 58 55·23	25 22 45·4	63·88
20	20 1 42·20	25 16 22·1	65·85
21	20 4 28·90	25 9 47·0	67·80
22	20 7 15·31	25 3 0·2	69·73
23	20 10 1·43	S. 24 56 1·8	71·67
	THURSDAY 18.		
0	20 12 47·25	S. 24 48 51·8	73·57
1	20 15 32·74	24 41 30·4	75·47
2	20 18 17·91	24 33 57·6	77·35
3	20 21 2·74	24 26 13·5	79·20
4	20 23 47·23	24 18 18·3	81·05
5	20 26 31·36	24 10 12·0	82·87
6	20 29 15·14	24 1 54·8	84·67
7	20 31 58·54	23 53 26·8	86·47
8	20 34 41·57	23 44 48·0	88·23
9	20 37 24·22	23 35 58·6	90·00
10	20 40 6·47	23 26 58·6	91·72
11	20 42 48·33	23 17 48·3	93·43
12	20 45 29·78	23 8 27·7	95·13
13	20 48 10·82	22 58 56·9	96·80
14	20 50 51·44	22 49 16·1	98·45
15	20 53 31·63	22 39 25·4	100·08
16	20 56 11·40	22 29 24·9	101·68
17	20 58 50·73	22 19 14·8	103·28
18	21 1 29·62	22 8 55·1	104·85
19	21 4 8·07	21 58 26·0	106·40
20	21 6 46·07	21 47 47·6	107·92
21	21 9 23·62	21 37 0·1	109·43
22	21 12 0·71	21 26 3·5	110·90
23	21 14 37·34	21 14 58·1	112·37
24	21 17 13·51	S. 21 3 43·9	

Hour.	Right Ascension.	Declination.	Diff. for
	FRIDAY 19.		
	h m s	° ′ ″	″
0	21 17 13·51	S. 21 3 43·9	113
1	21 19 49·21	20 52 21·1	115
2	21 22 24·45	20 40 49·8	116
3	21 24 59·21	20 29 10·2	117
4	21 27 33·50	20 17 22·4	119
5	21 30 7·31	20 5 26·6	120
6	21 32 40·65	19 53 22·8	121
7	21 35 13·51	19 41 11·2	123
8	21 37 45·88	19 28 51·9	124
9	21 40 17·78	19 16 25·1	125
10	21 42 49·20	19 3 51·0	126
11	21 45 20·14	18 51 9·7	128
12	21 47 50·59	18 38 21·2	129
13	21 50 20·56	18 25 25·8	130
14	21 52 50·05	18 12 23·6	131
15	21 55 19·06	17 59·14·7	132
16	21 57 47·59	17 45 59·3	133
17	22 0 15·63	17 32 37·5	134
18	22 2 43·20	17 19 9·4	135
19	22 5 10·30	17 5 35·2	136
20	22 7 36·91	16 51 55·1	137
21	22 10. 3·05	16 38 9·1	138
22	22 12 28·72	16 24 17·4	139
23	22 14 53·92	S. 16 10 20·1	140
	SATURDAY 20.		
0	22 17 18·65	S. 15 56 17·4	141
1	22 19 42·91	15 42 9·4	142
2	22 22 6·71	15 27 56·3	143
3	22 24 30·04	15 13 38·2	143
4	22 26 52·92	14 59 15·1	144
5	22 29 15·34	14 44 47·3	145
6	22 31 37·31	14 30 14·9	146
7	22 33 58·83	14 15 38·1	146
8	22 36 19·90	14 0 56·9	147
9	22 38 40·53	13 46 11·4	148
10	22 41 0·72	13 31 21·8	148
11	22 43 20·48	13 16 28·3	149
12	22 45 39·81	13 1 30·9	150
13	22 47 58·71	12 46 29·8	150
14	22 50 17·18	12 31 25·2	151
15	22 52 35·23	12 16 17·1	151
16	22 54 52·87	12 1 5·7	152
17	22 57 10·09	11 45 51·0	152
18	22 59 26·91	11 30 33·3	153
19	23 1 43·32	11 15 12·6	153
20	23 3 59·34	10 59 49·1	154
21	23 6 14·96	10 44 22·8	154
22	23 8 30·20	10 28 53·9	155
23	23 10 45·05	10 13 22·6	155
24	23 12 59·52	S. 9 57 48·9	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 21.		
	h m s	° ′ ″	″
0	23 12 59·52	S. 9 57 48·9	156·00
1	23 15 13·62	9 42 12·9	156·35
2	23 17 27·35	9 26 34·8	156·68
3	23 19 40·71	9 10 54·7	157·00
4	23 21 53·71	8 55 12·7	157·32
5	23 24 6·36	8 39 28·8	157·58
6	23 26 18·66	8 23 43·3	157·87
7	23 28 30·62	8 7 56·1	158·10
8	23 30 42·24	7 52 7·5	158·33
9	23 32 53·52	7 36 17·5	158·53
10	23 35 4·47	7 20 26·3	158·73
11	23 37 15·10	7 4 33·9	158·92
12	23 39 25·41	6 48 40·4	159·07
13	23 41 35·41	6 32 46·0	159·22
14	23 43 45·10	6 16 50·7	159·35
15	23 45 54·49	6 0 54·6	159·45
16	23 48 3·59	5 44 57·9	159·55
17	23 50 12·39	5 29 0·6	159·62
18	23 52 20·90	5 13 2·9	159·68
19	23 54 29·14	4 57 4·8	159·73
20	23 56 37·10	4 41 6·4	159·75
21	23 58 44·79	4 25 7·9	159·77
22	0 0 52·21	4 9 9·3	159·77
23	0 2 59·38	S. 3 53 10·7	159·77
	MONDAY 22.		
0	0 5 6·29	S. 3 37 12·1	159·72
1	0 7 12·96	3 21 13·8	159·68
2	0 9 19·38	3 5 15·7	159·62
3	0 11 25·57	2 49 18·0	159·55
4	0 13 31·53	2 33 20·7	159·45
5	0 15 37·26	2 17 24·0	159·35
6	0 17 42·77	2 1 27·9	159·23
7	0 19 48·06	1 45 32·5	159·10
8	0 21 53·15	1 29 37·9	158·97
9	0 23 58·03	1 13 44·1	158·80
10	0 26 2·71	0 57 51·3	158·62
11	0 28 7·19	0 41 59·6	158·45
12	0 30 11·49	0 26 8·9	158·25
13	0 32 15·61	S. 0 10 19·4	158·03
14	0 34 19·56	N. 0 5 28·8	157·82
15	0 36 23·33	0 21 15·7	157·58
16	0 38 26·94	0 37 1·2	157·32
17	0 40 30·38	0 52 45·1	157·07
18	0 42 33·67	1 8 27·5	156·80
19	0 44 36·81	1 24 8·3	156·52
20	0 46 39·81	1 39 47·4	156·22
21	0 48 42·66	1 55 24·7	155·92
22	0 50 45·38	2 11 0·2	155·58
	47·98	2 26 33·7	155·25
	°0·45	N. 2 42 5·2	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 23.		
	h m s	° ′ ″	″
0	0 54 50·45	N. 2 42 5·2	154·92
1	0 56 52·80	2 57 34·7	154·55
2	0 58 55·03	3 13 2·0	154·20
3	1 0 57·16	3 28 27·2	153·80
4	1 2 59·18	3 43 50·0	153·43
5	1 5 1·11	3 59 10·6	153·03
6	1 7 2·94	4 14 28·8	152·62
7	1 9 4·68	4 29 44·5	152·20
8	1 11 6·33	4 44 57·7	151·77
9	1 13 7·91	5 0 8·3	151·33
10	1 15 9·42	5 15 16·3	150·87
11	1 17 10·85	5 30 21·5	150·42
12	1 19 12·22	5 45 24·0	149·95
13	1 21 13·53	6 0 23·7	149·45
14	1 23 14·79	6 15 20·4	148·98
15	1 25 16·00	6 30 14·3	148·47
16	1 27 17·16	6 45 5·1	147·95
17	1 29 18·28	6 59 52·8	147·45
18	1 31 19·37	7 14 37·5	146·90
19	1 33 20·42	7 29 18·9	146·37
20	1 35 21·45	7 43 57·1	145·82
21	1 37 22·45	7 58 32·0	145·25
22	1 39 23·44	8 13 3·5	144·70
23	1 41 24·41	N. 8 27 31·7	144·10
	WEDNESDAY 24.		
0	1 43 25·37	N. 8 41 56·3	143·52
1	1 45 26·33	8 56 17·4	142·93
2	1 47 27·29	9 10 35·0	142·32
3	1 49 28·25	9 24 48·9	141·70
4	1 51 29·22	9 38 59·1	141·08
5	1 53 30·20	9 53 5·6	140·45
6	1 55 31·19	10 7 8·3	139·82
7	1 57 32·21	10 21 7·2	139·17
8	1 59 33·25	10 35 2·2	138·50
9	2 1 34·32	10 48 53·2	137·83
10	2 3 35·42	11 2 40·2	137·15
11	2 5 36·56	11 16 23·1	136·48
12	2 7 37·73	11 30 2·0	135·78
13	2 9 38·95	11 43 36·7	135·08
14	2 11 40·22	11 57 7·2	134·38
15	2 13 41·54	12 10 33·5	133·67
16	2 15 42·91	12 23 55·5	132·93
17	2 17 44·34	12 37 13·1	132·20
18	2 19 45·83	12 50 26·3	131·47
19	2 21 47·39	13 3 35·1	130·72
20	2 23 49·02	13 16 39·4	129·95
21	2 25 50·72	13 29 39·1	129·18
22	2 27 52·50	13 42 34·2	128·42
23	2 29 54·35	13 55 24·7	127·63
24	2 31 56·29	N.14 8 10·5	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 25.		
	h m s	° ′ ″	″
0	2 31 56·29	N.14 8 10·5	126·85
1	2 33 58·31	14 20 51·6	126·03
2	2 36 0·42	14 33 27·8	125·25
3	2 38 2·62	14 45 59·3	124·42
4	2 40 4·92	14 58 25·8	123·62
5	2 42 7·32	15 10 47·5	122·78
6	2 44 9·81	15 23 4·2	121·93
7	2 46 12·41	15 35 15·8	121·10
8	2 48 15·11	15 47 22·4	120·25
9	2 50 17·92	15 59 23·9	119·38
10	2 52 20·84	16 11 20·2	118·52
11	2 54 23·87	16 23 11·3	117·65
12	2 56 27·02	16 34 57·2	116·77
13	2 58 30·29	16 46 37·8	115·88
14	3 0 33·68	16 58 13·1	114·98
15	3 2 37·19	17 9 43·0	114·07
16	3 4 40·83	17 21 7·4	113·17
17	3 6 44·59	17 32 26·4	112·25
18	3 8 48·48	17 43 39·9	111·32
19	3 10 52·51	17 54 47·8	110·38
20	3 12 56·66	18 5 50·1	109·45
21	3 15 0·95	18 16 46·8	108·50
22	3 17 5·38	18 27 37·8	107·55
23	3 19 9·95	N.18 38 23·1	106·58
	FRIDAY 26.		
0	3 21 14·65	N.18 49 2·6	105·62
1	3 23 19·50	18 59 36·3	104·63
2	3 25 24·49	19 10 4·1	103·65
3	3 27 29·62	19 20 26·0	102·67
4	3 29 34·90	19 30 42·0	101·67
5	3 31 40·33	19 40 52·0	100·67
6	3 33 45·90	19 50 56·0	99·67
7	3 35 51·63	20 0 54·0	98·63
8	3 37 57·50	20 10 45·8	97·62
9	3 40 3·52	20 20 31·5	96·58
10	3 42 9·70	20 30 11·0	95·55
11	3 44 16·03	20 39 44·3	94·50
12	3 46 22·52	20 49 11·3	93·45
13	3 48 29·16	20 58 32·0	92·40
14	3 50 35·95	21 7 46·4	91·35
15	3 52 42·90	21 16 54·5	90·27
16	3 54 50·00	21 25 56·1	89·18
17	3 56 57·26	21 34 51·2	88·12
18	3 59 4·67	21 43 39·9	87·02
19	4 1 12·24	21 52 22·0	85·92
20	4 3 19·96	22 0 57·5	84·82
21	4 5 27·84	22 9 26·4	83·72
22	4 7 35·88	22 17 48·7	82·60
23	4 9 44·07	22 26 4·3	81·48
24	4 11 52·41	N.22 34 13·2	

Hour.	Right Ascension.	Declination.	Diff. D for 1
	SATURDAY 27.		
	h m s	° ′ ″	″
0	4 11 52·41	N.22 34 13·2	80·3
1	4 14 0·91	22 42 15·3	79·2
2	4 16 9·56	22 50 10·6	78·0
3	4 18 18·37	22 57 59·1	76·9
4	4 20 27·32	23 5 40·7	75·7
5	4 22 36·43	23 13 15·4	74·6
6	4 24 45·69	23 20 43·2	73·4
7	4 26 55·10	23 28 4·0	72·3
8	4 29 4·66	23 35 17·8	71·1
9	4 31 14·37	23 42 24·6	69·9
10	4 33 24·22	23 49 24·3	68·7
11	4 35 34·21	23 56 16·9	67·5
12	4 37 44·35	24 3 2·4	66·3
13	4 39 54·63	24 9 40·7	65·1
14	4 42 5·05	24 16 11·8	63·9
15	4 44 15·60	24 22 35·7	62·7
16	4 46 26·29	24 28 52·4	61·5
17	4 48 37·12	24 35 1·7	60·3
18	4 50 48·08	24 41 3·8	59·1
19	4 52 59·17	24 46 58·5	57·8
20	4 55 10·39	24 52 45·8	56·6
21	4 57 21·73	24 58 25·7	55·4
22	4 59 33·20	25 3 58·2	54·1
23	5 1 44·79	N.25 9 23·3	52·9
	SUNDAY 28.		
0	5 3 56·50	N.25 14 40·9	51·6
1	5 6 8·32	25 19 51·0	50·4
2	5 8 20·26	25 24 53·5	49·1
3	5 10 32·31	25 29 48·5	47·9
4	5 12 44·46	25 34 36·0	46·6
5	5 14 56·72	25 39 15·8	45·3
6	5 17 9·09	25 43 48·1	44·1
7	5 19 21·55	25 48 12·7	42·8
8	5 21 34·11	25 52 29·6	41·5
9	5 23 46·77	25 56 38·9	40·2
10	5 25 59·51	26 0 40·5	38·9
11	5 28 12·34	26 4 34·3	37·7
12	5 30 25·25	26 8 20·5	36·4
13	5 32 38·24	26 11 58·9	35·1
14	5 34 51·31	26 15 29·6	33·8
15	5 37 4·45	26 18 52·4	32·5
16	5 39 17·66	26 22 7·5	31·2
17	5 41 30·94	26 25 14·8	29·9
18	5 43 44·28	26 28 14·2	28·6
19	5 45 57·67	26 31 5·8	27·3
20	5 48 11·12	26 33 49·6	25·9
21	5 50 24·62	26 36 25·5	24·6
22	5 52 38·17	26 38 53·6	23·3
23	5 54 51·76	26 41 13·7	22·0
24	5 57 5·38	N.26 43 26·0	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 29.		
	h m s	° ′ ″	″
0	5 57 5·38	N.26 43 26·0	20·73
1	5 59 19·04	26 45 30·4	19·40
2	6 1 32·73	26 47 26·8	18·10
3	6 3 46·45	26 49 15·4	16·77
4	6 6 0·19	26 50 56·0	15·45
5	6 8 13·94	26 52 28·7	14·13
6	6 10 27·71	26 53 53·5	12·82
7	6 12 41·49	26 55 10·4	11·48
8	6 14 55·27	26 56 19·3	10·17
9	6 17 9·06	26 57 20·3	8·85
10	6 19 22·84	26 58 13·4	7·53
11	6 21 36·61	26 58 58·6	6·20
12	6 23 50·37	26 59 35·8	4·88
13	6 26 4·12	27 0 5·1	3·57
14	6 28 17·84	27 0 26·5	2·23
15	6 30 31·53	27 0 39·9	0·93
16	6 32 45·20	27 0 45·5	0·40
17	6 34 58·83	27 0 43·1	1·72
18	6 37 12·42	27 0 32·8	3·02
19	6 39 25·97	27 0 14·7	4·35
20	6 41 39·47	26 59 48·6	5·65
21	6 43 52·92	26 59 14·7	6·97
22	6 46 6·31	26 58 32·9	8·28
23	6 48 19·65	N.26 57 43·2	9·58
	TUESDAY 30.		
0	6 50 32·92	N.26 56 45·7	10·88
1	6 52 46·12	26 55 40·4	12·20
2	6 54 59·24	26 54 27·2	13·50
3	6 57 12·29	26 53 6·2	14·80
4	6 59 25·26	26 51 37·4	16·08
5	7 1 38·14	26 50 0·9	17·38
6	7 3 50·93	26 48 16·6	18·67
7	7 6 3·62	26 46 24·6	19·97
8	7 8 16·22	26 44 24·8	21·25
9	7 10 28·71	26 42 17·3	22·52
10	7 12 41·10	26 40 2·2	23·80
11	7 14 53·37	26 37 39·4	25·08
12	7 17 5·53	26 35 8·9	26·35
13	7 19 17·57	26 32 30·8	27·62
14	7 21 29·49	26 29 45·1	28·87
15	7 23 41·29	26 26 51·9	30·13
16	7 25 52·95	26 23 51·1	31·38
17	7 28 4·48	26 20 42·8	32·63
18	7 30 15·87	26 17 27·0	33·88
19	7 32 27·12	26 14 3·7	35·13
20	7 34 38·22	26 10 32·9	36·35
21	7 36 49·18	26 6 54·8	37·60
22	7 38 59·99	26 3 9·2	38·82
23	7 41 10·64	25 59 16·3	40·03
24	7 43 21·12	N.25 55 16·1	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 31.		
	h m s	° ′ ″	″
0	7 43 21·12	N.25 55 16·1	41·25
1	7 45 31·45	25 51 8·6	42·47
2	7 47 41·62	25 46 53·8	43·67
3	7 49 51·61	25 42 31·8	44·88
4	7 52 1·44	25 38 2·5	46·07
5	7 54 11·09	25 33 26·1	47·25
6	7 56 20·56	25 28 42·6	48·43
7	7 58 29·85	25 23 52·0	49·62
8	8 0 38·96	25 18 54·3	50·80
9	8 2 47·89	25 13 49·5	51·95
10	8 4 56·63	25 8 37·8	53·12
11	8 7 5·18	25 3 19·1	54·27
12	8 9 13·53	24 57 53·5	55·42
13	8 11 21·69	24 52 21·0	56·55
14	8 13 29·65	24 46 41·7	57·70
15	8 15 37·41	24 40 55·5	58·82
16	8 17 44·97	24 35 2·6	59·93
17	8 19 52·33	24 29 3·0	61·05
18	8 21 59·48	24 22 56·7	62·17
19	8 24 6·42	24 16 43·7	63·27
20	8 26 13·16	24 10 24·1	64·35
21	8 28 19·68	24 3 58·0	65·43
22	8 30 25·98	23 57 25·4	66·52
23	8 32 32·08	N.23 50 46·3	67·60
	THURSDAY, FEB. 1.		
0	8 34 37·95	N.23 44 0·7	

PHASES OF THE MOON.

		d	h	m
○	Full Moon - -	2	20	18·7
☾	*Last Quarter* -	11	0	13·2
●	New Moon - -	17	20	37·4
☽	*First Quarter* -	24	13	38·8

		d	h
☾	Apogee - - - - - -	4	23
☾	Perigee - - - - - -	18	2

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Pegasi W.	88 2 31	3352	89 25 43	3357	90 48 49	3362	92 11 49	3368
	α Arietis W.	44 56 27	3134	46 23 55	3131	47 51 27	3129	49 19 1	3128
	Aldebaran W.	14 48 10	3459	16 9 20	3381	17 31 58	3324	18 55 42	3280
	Pollux E.	31 8 2	2977	29 37 21	2985	28 6 49	2991	26 36 25	2999
	Regulus E.	67 33 27	2981	66 2 51	2988	64 32 23	2993	63 2 2	2999
2	α Pegasi W.	99 4 56	3404	100 27 8	3412	101 49 11	3422	103 11 3	3436
	α Arietis W.	56 37 9	3126	58 4 47	3127	59 32 24	3128	60 59 59	3129
	Aldebaran W.	26 4 8	3167	27 30 57	3156	28 57 59	3147	30 25 12	3139
	Saturn W.	22 41 16	3031	24 10 50	3031	25 40 24	3031	27 9 58	3031
	Regulus E.	55 32 1	3027	54 2 22	3032	52 32 49	3037	51 3 22	3043
	Spica ♍ E.	109 34 35	3021	108 4 48	3025	106 35 6	3030	105 5 30	3034
3	α Arietis W.	68 17 37	3136	69 45 3	3137	71 12 28	3139	72 39 50	3141
	Aldebaran W.	37 42 53	3122	39 10 36	3119	40 38 22	3119	42 6 8	3118
	Saturn W.	34 37 32	3039	36 6 56	3041	37 36 18	3043	39 5 38	3046
	Regulus E.	43 37 47	3069	42 8 59	3074	40 40 18	3079	39 11 43	3085
	Spica ♍ E.	97 38 41	3052	96 9 33	3056	94 40 29	3059	93 11 29	3062
4	α Arietis W.	79 56 10	3149	81 23 20	3150	82 50 29	3152	84 17 35	3154
	Aldebaran W.	49 25 12	3117	50 53 1	3117	52 20 50	3117	53 48 39	3117
	Saturn W.	46 31 38	3055	48 0 43	3056	49 29 46	3057	50 58 48	3060
	Regulus E.	31 50 33	3115	30 22 42	3123	28 55 0	3130	27 27 27	3138
	Spica ♍ E.	85 47 25	3076	84 18 46	3078	82 50 10	3081	81 21 37	3085
5	α Arietis W.	91 32 42	3160	92 59 39	3161	94 26 35	3161	95 53 31	3162
	Aldebaran W.	61 7 43	3117	62 35 32	3117	64 3 21	3116	65 31 11	3115
	Saturn W.	58 23 30	3064	59 52 23	3064	61 21 16	3065	62 50 8	3065
	Pollux W.	16 51 50	3112	18 19 45	3108	19 47 45	3105	21 15 49	3101
	Spica ♍ E.	73 59 23	3091	72 31 2	3091	71 2 41	3092	69 34 22	3092
6	α Arietis W.	103 7 57	3164	104 34 49	3164	106 1 41	3163	107 28 34	3163
	Aldebaran W.	72 50 37	3109	74 18 35	3108	75 46 35	3106	77 14 37	3104
	Saturn W.	70 14 33	3062	71 43 29	3061	73 12 26	3059	74 41 26	3057
	Pollux W.	28 37 2	3089	30 5 25	3086	31 33 52	3084	33 2 21	3081
	Spica ♍ E.	62 12 50	3092	60 44 30	3092	59 16 10	3091	57 47 49	3089
	Antares E.	108 4 43	3082	106 36 11	3081	105 7 38	3078	103 39 2	3077
7	Aldebaran W.	84 35 34	3089	86 3 57	3085	87 32 25	3082	89 0 57	3077
	Saturn W.	82 7 4	3043	83 36 23	3040	85 5 46	3036	86 35 14	3032
	Pollux W.	40 25 43	3064	41 54 37	3060	43 23 35	3056	44 52 39	3051
	Spica ♍ E.	50 25 33	3079	48 56 58	3077	47 28 20	3074	45 59 38	3071
	Antares E.	96 15 20	3063	94 46 25	3059	93 17 25	3055	91 48 20	3051
	Sun E.	134 38 38	3469	133 17 39	3463	131 56 34	3458	130 35 23	3453
8	Aldebaran W.	96 25 9	3050	97 54 20	3044	99 23 38	3037	100 53 5	3030
	Saturn W.	94 4 3	3005	95 34 9	2998	97 4 24	2992	98 34 47	2985
	Pollux W.	52 19 34	3022	53 49 19	3015	55 19 13	3009	56 49 15	3001
	Regulus W.	16 29 33	3182	17 56 4	3150	19 23 13	3124	20 50 54	3101
	Spica ♍ E.	38 35 8	3052	37 6 0	3048	35 36 47	3043	34 7 28	3040
	Antares E.	84 21 26	3024	82 51 43	3017	81 21 51	3010	79 51 50	3002
	Sun E.	123 47 49	3421	122 25 56	3413	121 3 54	3404	119 41 42	3396

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Pegasi	W.	93 34 42	3374	94 57 28	3381	96 20 6	3389	97 42 35	3396
	α Arietis	W.	50 46 37	3126	52 14 15	3126	53 41 53	3126	55 9 31	3126
	Aldebaran	W.	20 20 17	3245	21 45 33	3218	23 11 21	3197	24 37 34	3179
	Pollux	E.	25 6 11	3006	23 36 5	3014	22 6 9	3022	20 36 23	3030
	Regulus	E.	61 31 48	3005	60 1 41	3010	58 31 41	3016	57 1 48	3021
2	α Pegasi	W.	104 32 46	3440	105 54 17	3450	107 15 37	3462	108 36 44	3472
	α Arietis	W.	62 27 34	3130	63 55 7	3131	65 22 39	3133	66 50 9	3134
	Aldebaran	W.	31 52 34	3134	33 20 2	3130	34 47 35	3127	36 15 12	3124
	Saturn	W.	28 39 32	3032	30 9 5	3034	31 38 36	3035	33 8 5	3037
	Regulus	E.	49 34 2	3048	48 4 49	3053	46 35 42	3058	45 6 41	3064
	Spica ♍	E.	103 35 59	3037	102 6 32	3042	100 37 11	3045	99 7 54	3048
3	α Arietis	W.	74 7 10	3143	75 34 28	3144	77 1 44	3146	78 28 58	3148
	Aldebaran	W.	43 33 56	3117	45 1 45	3117	46 29 34	3117	47 57 23	3117
	Saturn	W.	40 34 54	3047	42 4 9	3049	43 33 21	3051	45 2 31	3053
	Regulus	E.	37 43 15	3091	36 14 54	3096	34 46 40	3102	33 18 33	3108
	Spica ♍	E.	91 42 33	3065	90 13 41	3068	88 44 52	3071	87 16 7	3073
4	α Arietis	W.	85 44 39	3155	87 11 42	3156	88 38 44	3157	90 5 44	3159
	Aldebaran	W.	55 16 28	3118	56 44 16	3117	58 12 5	3117	59 39 54	3117
	Saturn	W.	52 27 47	3061	53 56 45	3062	55 25 41	3063	56 54 36	3064
	Regulus	E.	26 0 4	3148	24 32 52	3159	23 5 54	3171	21 39 10	3186
	Spica ♍	E.	79 53 6	3085	78 24 38	3086	76 56 11	3087	75 27 46	3089
5	α Arietis	W.	97 20 25	3163	98 47 19	3164	100 14 11	3163	101 41 4	3163
	Aldebaran	W.	66 59 2	3114	68 26 54	3114	69 54 47	3113	71 22 41	3111
	Saturn	W.	64 19 0	3065	65 47 53	3065	67 16 45	3064	68 45 39	3064
	Pollux	W.	22 43 57	3098	24 12 9	3096	25 40 24	3094	27 8 41	3091
	Spica ♍	E.	68 6 3	3093	66 37 45	3092	65 9 26	3093	63 41 8	3093
6	α Arietis	W.	108 55 27	3162	110 22 21	3162	111 49 15	3161	113 16 11	3161
	Aldebaran	W.	78 42 42	3101	80 10 50	3099	81 39 1	3096	83 7 15	3092
	Saturn	W.	76 10 28	3056	77 39 32	3053	79 8 39	3050	80 37 50	3047
	Pollux	W.	34 30 54	3078	35 59 30	3075	37 28 10	3072	38 56 54	3068
	Spica ♍	E.	56 19 26	3087	54 51 1	3086	53 22 34	3084	51 54 5	3082
	Antares	E.	102 10 24	3074	100 41 43	3072	99 12 59	3069	97 44 11	3066
7	Aldebaran	W.	90 29 35	3072	91 58 19	3067	93 27 9	3062	94 56 5	3056
	Saturn	W.	88 4 47	3027	89 34 26	3022	91 4 12	3017	92 34 4	3011
	Pollux	W.	46 21 49	3046	47 51 5	3041	49 20 27	3035	50 49 57	3029
	Spica ♍	E.	44 30 53	3067	43 2 3	3064	41 33 9	3060	40 4 11	3056
	Antares	E.	90 19 10	3046	88 49 54	3041	87 20 32	3035	85 51 3	3029
	Sun	E.	129 14 6	3447	127 52 43	3440	126 31 12	3434	125 9 34	3428
8	Aldebaran	W.	102 22 41	3023	103 52 25	3015	105 22 19	3007	106 52 23	2999
	Saturn	W.	100 5 19	2977	101 36 1	2969	103 6 52	2961	104 37 54	2952
	Pollux	W.	58 19 27	2993	59 49 48	2985	61 20 20	2976	62 51 3	2967
	Regulus	W.	22 19 2	3081	23 47 35	3063	25 16 30	3045	26 45 47	3029
	Spica ♍	E.	32 38 5	3036	31 8 37	3032	29 39 4	3029	28 9 27	3026
	Antares	E.	78 21 40	2995	76 51 21	2987	75 20 52	2978	73 50 12	2969
		E.	118 19 21	3388	116 56 51	3379	115 34 10	3368	114 11 17	3359

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P. d.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Saturn W.	106 9 7	2943	107 40 32	2934	109 12 8	2924	110 43 57	2
	Pollux W.	64 21 57	2957	65 53 3	2948	67 24 21	2938	68 55 52	2
	Regulus W.	28 15 24	3013	29 45 20	2998	31 15 35	2984	32 46 8	2
	Spica ♍ E.	26 39 46	3023	25 10 2	3022	23 40 16	3022	22 10 30	3
	Antares E.	72 19 21	2960	70 48 18	2951	69 17 4	2941	67 45 37	2
	Sun E.	112 48 14	3348	111 24 58	3338	110 1 31	3326	108 37 50	3
10	Pollux W.	76 36 59	2868	78 9 59	2855	79 43 15	2841	81 16 49	2
	Regulus W.	40 23 26	2897	41 55 49	2883	43 28 30	2867	45 1 31	2
	Antares E.	60 4 54	2873	58 32 0	2860	56 58 50	2847	55 25 23	2
	Sun E.	101 35 54	3251	100 10 45	3237	98 45 19	3222	97 19 36	3
11	Pollux W.	89 9 12	2754	90 44 40	2738	92 20 29	2723	93 56 39	2
	Regulus W.	52 51 35	2772	54 26 39	2756	56 2 5	2739	57 37 53	2
	Antares E.	47 33 42	2763	45 58 25	2747	44 22 47	2732	42 46 50	2
	Sun E.	90 6 25	3128	88 38 49	3110	87 10 51	3093	85 42 33	3
12	Pollux W.	102 3 5	2620	103 41 33	2602	105 20 25	2583	106 59 43	2
	Regulus W.	65 42 40	2633	67 20 50	2615	68 59 25	2596	70 38 26	2
	Antares E.	34 41 44	2636	33 3 38	2619	31 25 9	2604	29 46 19	2
	Sun E.	78 15 26	2982	76 44 51	2962	75 13 51	2944	73 42 28	2
13	Regulus W.	78 59 57	2482	80 41 35	2463	82 23 40	2443	84 6 13	2
	Spica ♍ W.	25 6 19	2538	26 46 40	2510	28 27 39	2485	30 9 13	2
	Sun E.	65 59 10	2824	64 25 13	2804	62 50 50	2784	61 16 1	2
14	Regulus W.	92 45 45	2329	94 31 2	2311	96 16 45	2293	98 2 55	2
	Spica ♍ W.	38 45 27	2348	40 30 17	2327	42 15 37	2307	44 1 27	2
	Sun E.	53 15 20	2666	51 37 54	2646	50 0 1	2628	48 21 44	2
15	Spica ♍ W.	52 57 44	2193	54 46 22	2176	56 35 25	2160	58 24 53	2
	Sun E.	40 4 16	2525	38 23 38	2511	36 42 40	2498	35 1 24	2
20	Sun W.	30 52 13	2409	32 35 35	2417	34 18 46	2427	36 1 43	2
	α Arietis E.	66 37 3	2149	64 47 18	2163	62 57 55	2180	61 8 57	2
	Aldebaran E.	96 47 7	2083	94 55 41	2094	93 4 33	2107	91 13 44	2
	Saturn E.	98 39 35	2048	96 47 15	2059	94 55 12	2071	93 3 28	2
1	Sun W.	44 32 12	2504	46 13 19	2520	47 54 4	2536	49 34 27	2
	α Arietis E.	52 10 56	2296	50 24 51	2320	48 39 21	2344	46 54 26	2
	Aldebaran E.	82 4 58	2194	80 16 21	2210	78 28 9	2227	76 40 22	2
	Saturn E.	83 50 9	2158	82 0 38	2174	80 11 31	2190	78 22 48	2
22	Sun W.	57 50 29	2642	59 28 27	2661	61 6 0	2679	62 43 8	2
	Fomalhaut W.	32 10 2	2960	33 41 5	2919	35 13 0	2887	36 45 36	2
	α Arietis E.	38 19 50	2525	36 39 11	2562	34 59 24	2603	33 20 33	2
	Aldebaran E.	67 47 56	2335	66 2 48	2354	64 18 7	2373	62 33 54	2
	Saturn E.	69 25 38	2295	67 39 31	2313	65 53 50	2331	64 8 35	2
	Pollux E.	111 45 56	2300	109 59 56	2317	108 14 21	2335	106 29 13	2
23	Sun W.	70 42 27	2795	72 17 2	2814	73 51 12	2833	75 24 57	2
	Fomalhaut W.	44 34 43	2803	46 9 7	2801	47 43 34	2801	49 18 1	2
	α Pegasi W.	31 13 38	4326	32 20 7	4170	33 29 2	4038	34 40 4	3
	Aldebaran E.	53 59 49	2493	52 18 26	2513	50 37 31	2534	48 57 5	2
	Saturn E.	55 29 3	2442	53 46 28	2461	52 4 20	2480	50 22 38	2
	Pollux E.	97 50 3	2443	96 7 30	2462	94 25 23	2480	92 43 42	2

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Saturn W.	112 15 59	2903	113 48 14	2891	115 20 44	2880	116 53 28	2869
	Pollux W.	70 27 36	2916	71 59 35	2905	73 31 48	2893	75 4 16	2881
	Regulus W.	34 16 59	2954	35 48 9	2941	37 19 36	2926	38 51 22	2912
	Spica ♍ E.	20 40 47	3027	19 11 8	3036	17 41 40	3049	16 12 28	3069
	Antares E.	66 13 56	2920	64 42 2	2909	63 9 54	2898	61 37 32	2885
	Sun E.	107 13 56	3302	105 49 47	3291	104 25 25	3277	103 0 47	3264
10	Pollux W.	82 50 40	2814	84 24 49	2799	85 59 18	2785	87 34 5	2770
	Regulus W.	46 34 51	2836	48 8 32	2821	49 42 32	2805	51 16 53	2789
	Antares E.	53 51 39	2821	52 17 38	2806	50 43 18	2792	49 8 40	2777
	Sun E.	95 53 35	3192	94 27 16	3176	93 0 38	3161	91 33 42	3143
11	Pollux W.	95 33 10	2689	97 10 4	2672	98 47 21	2655	100 25 1	2637
	Regulus W.	59 14 3	2705	60 50 37	2687	62 27 34	2669	64 4 55	2652
	Antares E.	41 10 32	2700	39 33 52	2684	37 56 51	2668	36 19 28	2652
	Sun E.	84 13 52	3057	82 44 50	3039	81 15 25	3020	79 45 37	3001
12	Pollux W.	108 39 25	2547	110 19 33	2529	112 0 6	2510	113 41 6	2491
	Regulus W.	72 17 51	2559	73 57 43	2540	75 38 1	2520	77 18 46	2502
	Antares E.	28 7 7	2572	26 27 33	2556	24 47 38	2542	23 7 23	2529
	Sun E.	72 10 39	2904	70 38 25	2884	69 5 46	2864	67 32 41	2844
13	Regulus W.	85 49 13	2405	87 32 40	2386	89 16 35	2368	91 0 56	2348
	Spica ♍ W.	31 51 23	2437	33 34 5	2413	35 17 21	2391	37 1 9	2370
	Sun E.	59 40 45	2744	58 5 3	2724	56 28 55	2704	54 52 21	2684
14	Regulus W.	99 49 32	2257	101 36 35	2239	103 24 5	2222	105 11 59	2205
	Spica ♍ W.	45 47 46	2267	47 34 34	2248	49 21 50	2229	51 9 34	2212
	Sun E.	46 43 2	2592	45 3 56	2574	43 24 25	2558	41 44 32	2541
15	Spica ♍ W.	60 14 46	2128	62 5 2	2113	63 55 42	2099	65 46 43	2085
	Sun E.	33 19 49	2472	31 37 57	2462	29 55 51	2454	28 13 33	2447
20	Sun W.	37 44 24	2449	39 26 49	2462	41 8 56	2475	42 50 44	2489
	α Arietis E.	59 20 24	2214	57 32 18	2234	55 44 41	2254	53 57 33	2274
	Aldebaran E.	89 23 15	2134	87 33 7	2148	85 43 21	2163	83 53 58	2178
	Saturn E.	91 12 5	2098	89 21 2	2113	87 30 22	2127	85 40 4	2142
21	Sun W.	51 14 28	2570	52 54 4	2588	54 33 16	2604	56 12 5	2623
	α Arietis E.	45 10 8	2398	43 26 30	2426	41 43 32	2457	40 1 18	2490
	Aldebaran E.	74 53 1	2262	73 6 5	2279	71 19 35	2298	69 33 32	2316
	Saturn E.	76 34 31	2224	74 46 39	2241	72 59 13	2253	71 12 12	2276
22	Sun W.	64 19 51	2717	65 56 8	2736	67 32 0	2756	69 7 26	2775
	Fomalhaut W.	38 18 46	2841	39 52 21	2826	41 26 15	2815	43 0 24	2807
	α Arietis E.	31 42 42	2696	30 5 57	2750	28 30 24	2812	26 56 12	2881
	Aldebaran E.	60 50 8	2412	59 6 51	2432	57 24 2	2452	55 41 41	2472
	Saturn E.	62 23 48	2368	60 39 27	2386	58 55 32	2405	57 12 4	2424
	Pollux E.	104 44 31	2371	103 0 15	2389	101 16 25	2408	99 33 1	2426
23	Sun W.	76 58 18	2872	78 31 13	2890	80 3 45	2909	81 35 52	2927
	Fomalhaut W.	50 52 26	2806	52 26 46	2811	54 1 0	2817	55 35 6	2824
	α Pegasi W.	35 52 58	3829	37 7 30	3748	38 23 26	3678	39 40 37	3619
	Aldebaran E.	47 17 9	2576	45 37 41	2598	43 58 43	2620	42 20 15	2641
	Saturn E.	48 41 23	2517	47 0 33	2535	45 20 8	2553	43 40 9	2572
	Pollux E.	91 2 26	2516	89 21 35	2533	87 41 8	2551	86 1 6	2569

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Sun W.	83 7 36	2946	84 38 56	2965	86 9 52	2982	87 40 27	3001
	Fomalhaut W.	57 9 3	2831	58 42 51	2840	60 16 27	2849	61 49 52	2859
	α Pegasi W.	40 58 51	3566	42 18 2	3523	43 38 1	3486	44 58 41	3453
	Aldebaran E.	40 42 16	2664	39 4 48	2687	37 27 51	2711	35 51 26	2735
	Saturn E.	42 0 36	2591	40 21 28	2609	38 42 45	2627	37 4 26	2645
	Pollux E.	84 21 28	2585	82 42 13	2602	81 3 21	2620	79 24 53	2636
25	Sun W.	95 7 49	3087	96 36 15	3103	98 4 21	3119	99 32 8	3135
	Fomalhaut W.	69 33 43	2911	71 5 48	2922	72 37 39	2933	74 9 16	2944
	α Pegasi W.	51 49 30	3352	53 12 41	3340	54 36 6	3331	55 59 41	3324
	Aldebaran E.	27 57 49	2876	26 24 59	2910	24 52 53	2949	23 21 36	2992
	Saturn E.	28 59 1	2736	27 23 9	2755	25 47 42	2775	24 12 41	2794
	Pollux E.	71 18 0	2715	69 41 40	2730	68 5 40	2745	66 30 0	2759
	Regulus E.	107 40 22	2727	106 4 18	2741	104 28 32	2756	102 53 6	2769
26	Sun W.	106 46 24	3208	108 12 24	3222	109 38 7	3236	111 3 34	3248
	Fomalhaut W.	81 43 46	3001	83 13 58	3012	84 43 56	3023	86 13 40	3034
	α Pegasi W.	62 59 13	3306	64 23 17	3306	65 47 21	3307	67 11 24	3308
	α Arietis W.	19 36 28	3624	20 54 36	3529	22 14 28	3454	23 35 44	3394
	Pollux E.	58 36 13	2826	57 2 19	2839	55 28 42	2851	53 55 20	2863
	Regulus E.	95 0 24	2835	93 26 42	2848	91 53 16	2860	90 20 6	2871
27	Sun W.	118 7 9	3308	119 31 11	3319	120 55 0	3330	122 18 37	3341
	Fomalhaut W.	93 38 59	3088	95 7 23	3098	96 35 35	3109	98 3 34	3119
	α Pegasi W.	74 11 7	3321	75 34 54	3325	76 58 36	3330	78 22 13	3334
	α Arietis W.	30 35 16	3231	32 0 48	3214	33 26 41	3200	34 52 50	3188
	Pollux E.	46 12 10	2917	44 40 13	2927	43 8 29	2936	41 36 56	2946
	Regulus E.	82 37 48	2924	81 6 0	2935	79 34 25	2943	78 3 1	2952
28	Sun W.	129 13 48	3388	130 36 18	3397	131 58 38	3405	133 20 49	3414
	α Pegasi W.	85 18 56	3360	86 41 58	3365	88 4 54	3371	89 27 44	3378
	α Arietis W.	42 6 11	3158	43 33 10	3156	45 0 12	3153	46 27 18	3152
	Aldebaran W.	12 23 19	3754	13 39 9	3608	14 57 35	3503	16 17 56	3425
	Pollux E.	34 2 3	2989	32 31 36	2996	31 1 18	3004	29 31 10	3012
	Regulus E.	70 28 44	2993	68 58 23	3000	67 28 10	3007	65 58 6	3014
29	α Pegasi W.	96 20 2	3410	97 42 7	3417	99 4 4	3425	100 25 52	3432
	α Arietis W.	53 43 3	3148	55 10 14	3149	56 37 24	3149	58 4 34	3149
	Aldebaran W.	23 15 58	3235	24 41 26	3216	26 7 16	3202	27 33 23	3191
	Saturn W.	20 53 33	3073	22 22 15	3071	23 51 0	3070	25 19 46	3069
	Regulus E.	58 29 44	3043	57 0 25	3048	55 31 12	3053	54 2 5	3058
30	α Arietis W.	65 20 18	3151	66 47 26	3152	68 14 33	3153	69 41 39	3153
	Aldebaran W.	34 46 47	3154	36 13 51	3150	37 41 0	3147	39 8 13	3143
	Saturn W.	32 43 36	3073	34 12 19	3073	35 41 2	3074	37 9 43	3074
	Regulus E.	46 37 55	3080	45 9 21	3084	43 40 52	3087	42 12 27	3091
	Spica ♍ E.	100 39 22	3067	99 10 32	3069	97 41 44	3071	96 12 59	3073
31	α Arietis W.	76 57 6	3154	78 24 10	3153	79 51 15	3153	81 18 20	31[illegible]
	Aldebaran W.	46 25 10	3132	47 52 41	3129	49 20 15	3128	50 47 51	
	Saturn W.	44 32 57	3078	46 1 34	3078	47 30 10	3078	48 58 46	
	Regulus E.	34 51 33	3110	33 23 36	3115	31 55 45	3120	30 28 [illegible]	
	Spica ♍ E.	88 49 49	3081	87 21 16	3082	85 52 44	3082	84 [illegible]	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Sun W.	89 10 38	3018	90 40 28	3036	92 9 56	3053	93 39 3	3070
	Fomalhaut W.	63 23 4	2868	64 56 4	2879	66 28 50	2889	68 1 23	2899
	α Pegasi W.	46 19 58	3426	47 41 45	3402	49 3 59	3383	50 26 35	3366
	Aldebaran E.	34 15 33	2760	32 40 13	2787	31 5 28	2815	29 31 20	2844
	Saturn E.	35 26 32	2663	33 49 3	2681	32 11 58	2699	30 35 17	2718
	Pollux E.	77 46 47	2652	76 9 3	2669	74 31 41	2684	72 54 40	2700
25	Sun W.	100 59 35	3150	102 26 44	3165	103 53 35	3180	105 20 8	3194
	Fomalhaut W.	75 40 39	2956	77 11 47	2967	78 42 41	2978	80 13 21	2990
	α Pegasi W.	57 23 25	3318	58 47 16	3313	60 11 12	3311	61 35 11	3308
	Aldebaran E.	21 51 13	3041	20 21 51	3097	18 53 38	3166	17 26 48	3250
	Saturn E.	22 38 5	2815	21 3 57	2838	19 30 18	2862	17 57 10	2888
	Pollux E.	64 54 38	2773	63 19 35	2787	61 44 50	2801	60 10 23	2814
	Regulus E.	101 17 58	2783	99 43 8	2797	98 8 36	2811	96 34 22	2823
26	Sun W.	112 28 46	3261	113 53 43	3273	115 18 26	3286	116 42 54	3297
	Fomalhaut W.	87 43 10	3045	89 12 27	3056	90 41 31	3067	92 10 21	3077
	α Pegasi W.	68 35 26	3310	69 59 26	3312	71 23 23	3315	72 47 17	3319
	α Arietis W.	24 58 7	3346	26 21 25	3307	27 45 28	3276	29 10 7	3251
	Pollux E.	52 22 14	2874	50 49 22	2885	49 16 44	2896	47 44 20	2907
	Regulus E.	88 47 10	2883	87 14 29	2894	85 42 2	2904	84 9 48	2915
27	Sun W.	123 42 1	3351	125 5 14	3360	126 28 16	3370	127 51 7	3379
	Fomalhaut W.	99 31 21	3129	100 58 56	3139	102 26 18	3149	103 53 28	3159
	α Pegasi W.	79 45 45	3339	81 9 11	3344	82 32 32	3349	83 55 47	3354
	α Arietis W.	36 19 13	3180	37 45 46	3173	39 12 28	3167	40 39 17	3162
	Pollux E.	40 5 35	2955	38 34 26	2964	37 3 28	2972	35 32 40	2981
	Regulus E.	76 31 48	2961	75 0 47	2969	73 29 56	2977	71 59 15	2985
28	Sun W.	134 42 50	3422	136 4 42	3430	137 26 25	3438	138 47 59	3445
	α Pegasi W.	90 50 26	3384	92 13 1	3389	93 35 30	3397	94 57 50	3404
	α Arietis W.	47 54 25	3151	49 21 33	3149	50 48 43	3149	52 15 53	3149
	Aldebaran W.	17 39 44	3365	19 2 40	3320	20 26 28	3285	21 50 57	3258
	Pollux E.	28 1 12	3019	26 31 23	3026	25 1 43	3034	23 32 12	3042
	Regulus E.	64 28 11	3020	62 58 23	3026	61 28 43	3032	59 59 10	3038
29	α Pegasi W.	101 47 32	3441	103 9 2	3449	104 30 23	3458	105 51 34	3467
	α Arietis W.	59 31 44	3149	60 58 54	3151	62 26 2	3150	63 53 11	3152
	Aldebaran W.	28 59 43	3180	30 26 16	3172	31 52 59	3165	33 19 50	3160
	Saturn W.	26 48 33	3070	28 17 19	3070	29 46 5	3070	31 14 51	3071
	Regulus E.	52 33 4	3063	51 4 9	3067	49 35 19	3072	48 6 35	3075
30	α Arietis W.	71 8 45	3153	72 35 51	3153	74 2 56	3153	75 30 1	3153
	Aldebaran W.	40 35 30	3140	42 2 51	3138	43 30 14	3135	44 57 41	3134
	Saturn W.	38 38 24	3076	40 7 3	3076	41 35 42	3077	43 4 20	3078
	Regulus E.	40 44 7	3095	39 15 51	3099	37 47 40	3103	36 19 34	3107
	Spica ♍ E.	94 44 17	3075	93 15 37	3077	91 46 59	3078	90 18 23	3080
31	α Arietis W.	82 45 24	3153	84 12 30	3153	85 39 35	3153	87 6 40	3153
	Aldebaran W.	52 15 29	3125	53 43 8	3123	55 10 50	3121	56 38 34	3119
	Saturn W.	50 27 22	3078	51 55 58	3078	53 24 34	3078	54 53 10	3078
	lus E.	29 0 21	3131	27 32 49	3138	26 5 25	3144	24 38 9	3153
	♍ E.	82 55 43	3084	81 27 14	3084	79 58 45	3084	78 30 16	3085

CONFIGURATIONS OF THE SATELLITES OF JUPITER

At 4^h 30^m, MEAN TIME.

Day of the Month.	*West.*				*East.*			
1			·1	○	2·	·4		(
2		3·	·2	○	1·		·4	
3	·2●		·3	·1 ○				·4

The SATELLITES are not visible

from the 3d day of January until the 24th day of February,

JUPITER being too near to the SUN.

This Table represents, at 4^h 30^m after *Mean Noon* of each day of the Month, the relative posit of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) i inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; Satellites by points. The numerals 1, 2, 3, and 4, annexed to the points, serve to distinguish Satellites from each other; and their positions are such as to indicate the directions of the S lites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellit at its greatest elongation, the point is placed above or below the centre of the numeral. A circle (○) at the left or right hand of the page, denotes that the Satellite placed by the si *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc or Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding 0d·660705. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	−0·5567	+1·3019	−9·3913	−0·7422	5 16 50·70	284	0	·000
2	0·5943	1·3003	9·3846	0·7434	5 12 54·79	285	1	·003
3	0·6289	1·2986	9·3779	0·7445	5 8 58·88	286	2	·005
4	−0·6607	+1·2967	−9·3710	−0·7457	5 5 2·96	287	3	·008
5	0·6903	1·2947	9·3641	0·7469	5 1 7·05	288	4	·011
6	0·7178	1·2925	9·3570	0·7482	4 57 11·14	289	5	·014
7	−0·7436	+1·2902	−9·3499	−0·7495	4 53 15·23	290	6	·016
8	0·7677	1·2877	9·3427	0·7508	4 49 19·32	291	7	·019
9	0·7905	1·2851	9·3355	0·7522	4 45 23·40	292	8	·022
10	−0·8120	+1·2823	−9·3282	−0·7537	4 41 27·49	293	9	·025
11	0·8324	1·2794	9·3207	0·7551	4 37 31·58	294	10	·027
12	0·8517	1·2763	9·3132	0·7566	4 33 35·67	295	11	·030
13	−0·8701	+1·2730	−9·3056	−0·7582	4 29 39·75	296	12	·033
14	0·8876	1·2697	9·2979	0·7597	4 25 43·84	297	13	·036
15	0·9043	1·2661	9·2902	0·7613	4 21 47·93	298	14	·038
16	−0·9202	+1·2623	−9·2823	−0·7629	4 17 52·02	299	15	·041
17	0·9354	1·2584	9·2743	0·7645	4 13 56·11	300	16	·044
18	0·9500	1·2543	9·2663	0·7662	4 10 0·19	301	17	·047
19	−0·9640	+1·2501	−9·2582	−0·7679	4 6 4·28	302	18	·049
20	0·9774	1·2456	9·2500	0·7696	4 2 8·37	303	19	·052
21	0·9902	1·2410	9·2417	0·7713	3 58 12·46	304	20	·055
22	−1·0026	+1·2362	−9·2333	−0·7730	3 54 16·55	305	21	·058
23	1·0145	1·2312	9·2248	0·7748	3 50 20·64	306	22	·060
24	1·0259	1·2260	9·2162	0·7765	3 46 24·73	307	23	·063
25	−1·0369	+1·2206	−9·2075	−0·7783	3 42 28·82	308	24	·066
26	1·0475	1·2150	9·1987	0·7801	3 38 32·90	309	25	·068
27	1·0577	1·2092	9·1899	0·7819	3 34 36·99	310	26	·071
28	−1·0675	+1·2031	−9·1810	−0·7836	3 30 41·08	311	27	·074
29	1·0770	1·1969	9·1719	0·7854	3 26 45·17	312	28	·077
30	1·0861	1·1904	9·1627	0·7872	3 22 49·26	313	29	·079
31	1·0949	1·1837	9·1534	0·7890	3 18 53·35	314	30	·082
	·1034	+1·1767	−9·1441	−0·7908	3 14 57·44	315	31	·085

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time *to be added to Apparent Time.*	Diff. for 1 hour.
		h m s	s	° ′ ″	″	m s	m s	s
Thur.	1	20 58 24·13	10·174	S. 17 10 16·2	42·90	1 8·29	13 51·32	0·317
Frid.	2	21 2 28·31	10·140	16 53 6·7	43·63	1 8·17	13 58·93	0·283
Sat.	3	21 6 31·67	10·106	16 35 39·5	44·35	1 8·06	14 5·71	0·248
Sun.	4	21 10 34·21	10·072	16 17 55·0	45·05	1 7·94	14 11·68	0·216
Mon.	5	21 14 35·95	10·039	15 59 53·7	45·74	1 7·82	14 16·84	0·182
Tues.	6	21 18 36·88	10·005	15 41 35·9	46·41	1 7·71	14 21·21	0·148
Wed.	7	21 22 37·01	9·973	15 23 2·0	47·07	1 7·59	14 24·78	0·115
Thur.	8	21 26 36·36	9·940	15 4 12·4	47·70	1 7·48	14 27·55	0·083
Frid.	9	21 30 34·92	9·908	14 45 7·6	48·33	1 7·37	14 29·56	0·052
Sat.	10	21 34 32·72	9·876	14 25 47·7	48·93	1 7·26	14 30·80	0·020
Sun.	11	21 38 29·75	9·845	14 6 13·5	49·52	1 7·14	14 31·28	0·012
Mon.	12	21 42 26·03	9·813	13 46 25·1	50·08	1 7·03	14 30·99	0·043
Tues.	13	21 46 21·54	9·782	13 26 23·1	50·63	1 6·93	14 29·96	0·074
Wed.	14	21 50 16·32	9·752	13 6 7·9	51·17	1 6·82	14 28·18	0·105
Thur.	15	21 54 10·36	9·721	12 45 39·9	51·68	1 6·71	14 25·68	0·135
Frid.	16	21 58 3·67	9·691	12 24 59·6	52·18	1 6·61	14 22·44	0·165
Sat.	17	22 1 56·26	9·661	12 4 7·3	52·66	1 6·50	14 18·48	0·194
Sun.	18	22 5 48·13	9·632	11 43 3·6	53·12	1 6·40	14 13·82	0·223
Mon.	19	22 9 39·30	9·603	11 21 48·8	53·56	1 6·30	14 8·45	0·251
Tues.	20	22 13 29·79	9·575	11 0 23·3	53·98	1 6·21	14 2·40	0·280
Wed.	21	22 17 19·60	9·547	10 38 47·7	54·39	1 6·11	13 55·67	0·308
Thur.	22	22 21 8·74	9·520	10 17 2·4	54·78	1 6·02	13 48·27	0·335
Frid.	23	22 24 57·22	9·494	9 55 7·7	55·15	1 5·93	13 40·23	0·361
Sat.	24	22 28 45·07	9·468	9 33 4·2	55·50	1 5·84	13 31·54	0·388
Sun.	25	22 32 32·30	9·443	9 10 52·1	55·84	1 5·76	13 22·24	0·413
Mon.	26	22 36 18·92	9·419	8 48 31·9	56·16	1 5·67	13 12·34	0·437
Tues.	27	22 40 4·97	9·395	8 26 4·1	56·46	1 5·59	13 1·86	0·461
Wed.	28	22 43 50·44	9·372	8 3 29·1	56·75	1 5·52	12 50·80	0·483
Thur.	29	22 47 35·37		S. 7 40 47·1		1 5·44	12 39·20	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ˢ·18 from the *Sidereal*

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be subtracted from Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Thur.	1	20 58 21·78	S. 17 10 26·1	16 15·9	13 51·24	20 44 30·54
Frid.	2	21 2 25·95	16 53 16·8	16 15·7	13 58·86	20 48 27·09
Sat.	3	21 6 29·30	16 35 49·9	16 15·6	14 5·65	20 52 23·65
Sun.	4	21 10 31·83	16 18 5·7	16 15·4	14 11·63	20 56 20·20
Mon.	5	21 14 33·56	16 0 4·6	16 15·2	14 16·80	21 0 16·76
Tues.	6	21 18 34·49	15 41 47·0	16 15·0	14 21·18	21 4 13·31
Wed.	7	21 22 34·62	15 23 13·3	16 14·9	14 24·75	21 8 9·87
Thur.	8	21 26 33·96	15 4 23·9	16 14·7	14 27·53	21 12 6·43
Frid.	9	21 30 32·53	14 45 19·2	16 14·5	14 29·55	21 16 2·98
Sat.	10	21 34 30·33	14 25 59·6	16 14·3	14 30·79	21 19 59·54
Sun.	11	21 38 27·37	14 6 25·4	16 14·1	14 31·28	21 23 56·09
Mon.	12	21 42 23·65	13 46 37·2	16 13·9	14 31·00	21 27 52·65
Tues.	13	21 46 19·18	13 26 35·4	16 13·7	14 29·98	21 31 49·20
Wed.	14	21 50 13·97	13 6 20·3	16 13·5	14 28·21	21 35 45·76
Thur.	15	21 54 8·02	12 45 52·4	16 13·3	14 25·71	21 39 42·31
Frid.	16	21 58 1·35	12 25 12·1	16 13·1	14 22·48	21 43 38·87
Sat.	17	22 1 53·95	12 4 19·9	16 12·9	14 18·53	21 47 35·42
Sun.	18	22 5 45·85	11 43 16·2	16 12·7	14 13·87	21 51 31·98
Mon.	19	22 9 37·04	11 22 1·4	16 12·5	14 8·51	21 55 28·53
Tues.	20	22 13 27·55	11 0 36·0	16 12·3	14 2·46	21 59 25·09
Wed.	21	22 17 17·38	10 39 0·4	16 12·0	13 55·74	22 3 21·64
Thur.	22	22 21 6·55	10 17 15·0	16 11·8	13 48·35	22 7 18·20
Frid.	23	22 24 55·06	9 55 20·3	16 11·6	13 40·31	22 11 14·75
Sat.	24	22 28 42·93	9 33 16·7	16 11·4	13 31·63	22 15 11·30
Sun.	25	22 32 30·19	9 11 4·5	16 11·2	13 22·33	22 19 7·86
Mon.	26	22 36 16·85	8 48 44·3	16 10·9	13 12·44	22 23 4·41
Tues.	27	22 40 2·92	8 26 16·4	16 10·7	13 1·96	22 27 0·97
Wed.	28	22 43 48·43	8 3 41·2	16 10·5	12 50·91	22 30 57·52
Thur.	29	22 47 33·39	S. 7 40 59·1	16 10·2	12 39·31	22 34 54·08

*midiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax *Noon.*	THE MOON'S Horizontal Parallax *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	312 7 26·1	N.0·38	9·9937055	14 44·1	14 44·2	53 58·1	53 58
2	313 8 16·1	0·40	9·9937730	14 44·7	14 45·6	54 0·4	54 3
3	314 9 5·0	0·39	9·9938430	14 46·7	14 48·3	54 7·8	54 13
4	315 9 52·8	0·35	9·9939156	14 50·2	14 52·5	54 20·4	54 28
5	316 10 39·5	0·28	9·9939904	14 55·2	14 58·4	54 38·9	54 50
6	317 11 25·2	0·18	9·9940675	15 1·9	15 5·9	55 3·4	55 18
7	318 12 9·8	N.0·07	9·9941467	15 10·4	15 15·3	55 34·4	55 52
8	319 12 53·3	S.0·06	9·9942279	15 20·8	15 26·7	56 12·3	56 33
9	320 13 35·8	0·20	9·9943110	15 32·9	15 39·6	56 56·8	57 21
10	321 14 17·3	0·33	9·9943958	15 46·5	15 53·7	57 46·7	58 13
11	322 14 57·7	0·45	9·9944821	16 0·9	16 8·2	58 39·6	59 6
12	323 15 37·0	0·56	9·9945699	16 15·3	16 22·0	59 32·0	59 56
13	324 16 15·0	0·65	9·9946589	16 28·2	16 33·7	60 19·4	60 39
14	325 16 51·7	0·72	9·9947492	16 38·2	16 41·6	60 56·0	61 8
15	326 17 27·0	0·75	9·9948405	16 43·9	16 44·8	61 16·7	61 20
16	327 18 0·9	0·76	9·9949325	16 44·4	16 42·6	61 18·6	61 12
17	328 18 33·3	0·74	9·9950255	16 39·4	16 35·2	61 0·6	60 44
18	329 19 4·0	0·68	9·9951194	16 29·8	16 23·5	60 25·2	60 2
19	330 19 33·0	0·60	9·9952142	16 16·5	16 8·9	59 36·4	59 8
20	331 20 0·3	0·50	9·9953100	16 0·9	15 52·9	58 39·6	58 10
21	332 20 25·8	0·38	9·9954068	15 45·0	15 37·2	57 41·2	57 12
22	333 20 49·3	0·24	9·9955045	15 29·8	15 22·8	56 45·6	56 20
23	334 21 10·9	S.0·11	9·9956033	15 16·4	15 10·5	55 56·3	55 34
24	335 21 30·4	N.0·03	9·9957034	15 5·2	15 0·6	55 15·5	54 58
25	336 21 48·0	0·15	9·9958048	14 56·6	14 53·2	54 43·7	54 31
26	337 22 3·6	0·25	9·9959075	14 50·4	14 48·3	54 21·2	54 13
27	338 22 17·2	0·33	9·9960117	14 46·8	14 45·7	54 7·9	54 4
28	339 22 28·7	0·39	9·9961176	14 45·2	14 45·1	54 2·2	54 1
29	340 22 38·2	N.0·41	9·9962250	14 45·5	14 46·3	54 3·3	54 6

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Thur.	1	125 1 21·7	130 57 38·2	N. 4 51 16·7	N. 4 56 43·3	14·1	12 13·5
Frid.	2	136 54 15·8	142 51 23·2	4 58 55·7	4 57 52·0	15·1	12 59·0
Sat.	3	148 49 9·2	154 47 43·2	4 53 32·0	4 45 57·2	16·1	13 42·3
Sun.	4	160 47 15·7	166 47 59·5	4 35 10·6	4 21 17·2	17·1	14 24·0
Mon.	5	172 50 8·5	178 53 59·1	4 4 23·6	3 44 38·1	18·1	15 4·8
Tues.	6	184 59 50·8	191 8 5·1	3 22 10·1	2 57 11·2	19·1	15 45·7
Wed.	7	197 19 6·7	203 33 22·3	2 29 53·9	2 0 33·3	20·1	16 27·8
Thur.	8	209 51 20·5	216 13 31·4	1 29 25·4	N. 0 56 48·5	21·1	17 12·5
Frid.	9	222 40 25·9	229 12 34·6	N. 0 23 2·9	S. 0 11 28·8	22·1	18 0·9
Sat.	10	235 50 26·3	242 34 27·2	S. 0 46 21·3	1 21 7·0	23·1	18 54·2
Sun.	11	249 24 58·7	256 22 16·0	1 55 15·6	2 28 14·4	24·1	19 52·8
Mon.	12	263 26 25·9	270 37 25·0	2 59 28·5	3 28 21·0	25·1	20 55·8
Tues.	13	277 54 57·7	285 18 35·4	3 54 15·6	4 16 35·9	26·1	22 0·9
Wed.	14	292 47 35·7	300 21 1·3	4 34 48·2	4 48 23·2	27·1	23 5·1
Thur.	15	307 57 43·9	315 36 24·0	4 56 58·0	5 0 16·1	28·1	☌
Frid.	16	323 15 35·5	330 53 49·9	4 58 11·7	4 50 47·3	29·1	0 5·9
Sat.	17	338 29 39·8	346 1 45·3	4 38 15·2	4 20 56·5	0·7	1 2·3
Sun.	18	353 28 53·6	0 50 5·4	3 59 19·5	3 33 57·4	1·7	1 54·8
Mon.	19	8 4 35·7	15 11 53·5	3 5 27·7	2 34 28·2	2·7	2 44·5
Tues.	20	22 11 42·1	29 3 57·3	2 1 37·5	1 27 32·9	3·7	3 32·5
Wed.	21	35 48 46·9	42 26 27·9	S. 0 52 48·1	S. 0 17 54·7	4·7	4 20·2
Thur.	22	48 57 24·9	55 22 8·1	N. 0 16 39·1	N. 0 50 28·0	5·7	5 8·4
Frid.	23	61 41 12·0	67 55 13·0	1 23 10·1	1 54 26·0	6·7	5 57·8
Sat.	24	74 4 49·8	80 10 40·3	2 23 59·0	2 51 33·6	7·7	6 48·4
Sun.	25	86 13 22·4	92 13 32·2	3 16 57·5	3 39 58·0	8·7	7 39·9
Mon.	26	98 11 44·8	104 8 31·9	4 0 25·5	4 18 10·0	9·7	8 31·3
Tues.	27	110 4 23·8	115 59 47·3	4 33 3·3	4 44 58·1	10·7	9 21·7
Wed.	28	121 55 6·6	127 50 43·0	4 53 48·0	4 59 28·0	11·7	10 10·2
Thur.	29	133 46 54·7	139 43 57·9	N. 5 1 53·4	N. 5 1 2·1	12·7	10 56·5

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Di f
	THURSDAY 1.				*SATURDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	8 34 37·95	N.23 44 0·7	68·65	0	10 10 57·00	N.16 28 30·2	1
1	8 36 43·61	23 37 8·8	69·72	1	10 12 52·12	16 17 26·6	1
2	8 38 49·06	23 30 10·5	70·77	2	10 14 47·04	16 6 18·9	1
3	8 40 54·28	23 23 5·9	71·82	3	10 16 41·77	15 55 7·2	1
4	8 42 59·28	23 15 55·0	72·83	4	10 18 36·32	15 43 51·6	1
5	8 45 4·06	23 8 38·0	73·87	5	10 20 30·68	15 32 32·1	1
6	8 47 8·62	23 1 14·8	74·90	6	10 22 24·85	15 21 8·6	1
7	8 49 12·95	22 53 45·4	75·90	7	10 24 18·84	15 9 41·4	1
8	8 51 17·06	22 46 10·0	76·92	8	10 26 12·65	14 58 10·5	1
9	8 53 20·94	22 38 28·5	77·92	9	10 28 6·28	14 46 35·8	1
10	8 55 24·59	22 30 41·0	78·90	10	10 29 59·74	14 34 57·4	1
11	8 57 28·01	22 22 47·6	79·88	11	10 31 53·03	14 23 15·4	1
12	8 59 31·21	22 14 48·3	80·87	12	10 33 46·15	14 11 29·9	1
13	9 1 34·18	22 6 43·1	81·82	13	10 35 39·10	13 59 40·8	1
14	9 3 36·92	21 58 32·2	82·80	14	10 37 31·89	13 47 48·3	1
15	9 5 39·43	21 50 15·4	83·73	15	10 39 24·51	13 35 52·3	1
16	9 7 41·71	21 41 53·0	84·68	16	10 41 16·98	13 23 53·0	1
17	9 9 43·76	21 33 24·9	85·62	17	10 43 9·29	13 11 50·3	1
18	9 11 45·58	21 24 51·2	86·55	18	10 45 1·45	12 59 44·3	1
19	9 13 47·18	21 16 11·9	87·47	19	10 46 53·45	12 47 35·1	1
20	9 15 48·55	21 7 27·1	88·38	20	10 48 45·31	12 35 22·7	1
21	9 17 49·68	20 58 36·8	89·28	21	10 50 37·03	12 23 7·2	1
22	9 19 50·59	20 49 41·1	90·17	22	10 52 28·60	12 10 48·5	1
23	9 21 51·28	N.20 40 40·1	91·07	23	10 54 20·03	N.11 58 26·8	1
	FRIDAY 2.				*SUNDAY* 4.		
0	9 23 51·74	N.20 31 33·7	91·93	0	10 56 11·33	N.11 46 2·1	1
1	9 25 51·98	20 22 22·1	92·82	1	10 58 2·50	11 33 34·4	1
2	9 27 51·99	20 13 5·2	93·68	2	10 59 53·54	11 21 3·8	1
3	9 29 51·78	20 3 43·1	94·53	3	11 1 44·45	11 8 30·4	1
4	9 31 51·34	19 54 15·9	95·37	4	11 3 35·24	10 55 54·1	1
5	9 33 50·68	19 44 43·7	96·22	5	11 5 25·91	10 43 15·1	1
6	9 35 49·80	19 35 6·4	97·05	6	11 7 16·46	10 30 33·3	1
7	9 37 48·69	19 25 24·1	97·87	7	11 9 6·90	10 17 48·9	1
8	9 39 47·36	19 15 36·9	98·68	8	11 10 57·23	10 5 1·8	1
9	9 41 45·81	19 5 44·8	99·48	9	11 12 47·45	9 52 12·1	1
10	9 43 44·05	18 55 47·9	100·28	10	11 14 37·57	9 39 19·9	1
11	9 45 42·07	18 45 46·2	101·08	11	11 16 27·59	9 26 25·2	1
12	9 47 39·86	18 35 39·7	101·87	12	11 18 17·51	9 13 28·0	1
13	9 49 37·44	18 25 28·5	102·63	13	11 20 7·34	9 0 28·4	1
14	9 51 34·80	18 15 12·7	103·40	14	11 21 57·08	8 47 26·5	1
15	9 53 31·96	18 4 52·3	104·15	15	11 23 46·73	8 34 22·3	1
16	9 55 28·90	17 54 27·4	104·90	16	11 25 36·30	8 21 15·7	1
17	9 57 25·63	17 43 58·0	105·65	17	11 27 25·79	8 8 7·0	1
18	9 59 22·15	17 33 24·1	106·38	18	11 29 15·20	7 54 56·1	1
19	10 1 18·46	17 22 45·8	107·10	19	11 31 4·54	7 41 43·1	1
20	10 3 14·57	17 12 3·2	107·82	20	11 32 53·82	7 28 27·9	1
21	10 5 10·48	17 1 16·3	108·53	21	11 34 43·03	7 15 10·8	1
22	10 7 6·19	16 50 25·1	109·23	22	11 36 32·18	7	
23	10 9 1·69	16 39 29·	109·92	23	11 38 21·27	6	
24	10 10 57·00	N.16 28 30·2		24	11 40 10·31		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 5.				*WEDNESDAY* 7.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	11 40 10·31	N. 6 35 7·5	134·15	0	13 7 41·24	S. 4 29 50·1	140·07
1	11 41 59·30	6 21 42·6	134·43	1	13 9 32·76	4 43 50·5	139·98
2	11 43 48·24	6 8 16·0	134·75	2	13 11 24·44	4 57 50·4	139·92
3	11 45 37·14	5 54 47·5	135·03	3	13 13 16·29	5 11 49·9	139·82
4	11 47 26·01	5 41 17·3	135·30	4	13 15 8·32	5 25 48·8	139·72
5	11 49 14·84	5 27 45·5	135·58	5	13 17 0·52	5 39 47·1	139·60
6	11 51 3·64	5 14 12·0	135·85	6	13 18 52·90	5 53 44·7	139·48
7	11 52 52·42	5 0 36·9	136·10	7	13 20 45·47	6 7 41·6	139·37
8	11 54 41·17	4 47 0·3	136·35	8	13 22 38·23	6 21 37·8	139·23
9	11 56 29·90	4 33 22·2	136·60	9	13 24 31·19	6 35 33·2	139·08
10	11 58 18·62	4 19 42·6	136·83	10	13 26 24·35	6 49 27·7	138·93
11	12 0 7·33	4 6 1·6	137·07	11	13 28 17·72	7 3 21·3	138·77
12	12 1 56·03	3 52 19·2	137·28	12	13 30 11·30	7 17 13·9	138·60
13	12 3 44·73	3 38 35·5	137·50	13	13 32 5·10	7 31 5·5	138·42
14	12 5 33·43	3 24 50·5	137·70	14	13 33 59·11	7 44 56·0	138·22
15	12 7 22·14	3 11 4·3	137·90	15	13 35 53·35	7 58 45·3	138·02
16	12 9 10·86	2 57 16·9	138·10	16	13 37 47·82	8 12 33·4	137·82
17	12 10 59·60	2 43 28·3	138·27	17	13 39 42·53	8 26 20·3	137·58
18	12 12 48·35	2 29 38·7	138·45	18	13 41 37·48	8 40 5·8	137·37
19	12 14 37·13	2 15 48·0	138·62	19	13 43 32·67	8 53 50·0	137·12
20	12 16 25·93	2 1 56·3	138·77	20	13 45 28·12	9 7 32·7	136·87
21	12 18 14·76	1 48 3·7	138·93	21	13 47 23·82	9 21 13·9	136·60
22	12 20 3·64	1 34 10·1	139·08	22	13 49 19·78	9 34 53·5	136·33
23	12 21 52·55	N. 1 20 15·6	139·20	23	13 51 16·01	S. 9 48 31·5	136·07
	TUESDAY 6.				*THURSDAY* 8.		
0	12 23 41·50	N. 1 6 20·4	139·33	0	13 53 12·51	S. 10 2 7·9	135·77
1	12 25 30·50	0 52 24·4	139·47	1	13 55 9·28	10 15 42·5	135·45
2	12 27 19·56	0 38 27·6	139·57	2	13 57 6·33	10 29 15·2	135·15
3	12 29 8·67	0 24 30·2	139·67	3	13 59 3·67	10 42 46·1	134·83
4	12 30 57·85	N. 0 10 32·2	139·78	4	14 1 1·30	10 56 15·1	134·48
5	12 32 47·09	S. 0 3 26·5	139·87	5	14 2 59·23	11 9 42·0	134·15
6	12 34 36·40	0 17 25·7	139·95	6	14 4 57·45	11 23 6·9	133·78
7	12 36 25·79	0 31 25·4	140·02	7	14 6 55·98	11 36 29·6	133·42
8	12 38 15·25	0 45 25·5	140·10	8	14 8 54·82	11 49 50·1	133·05
9	12 40 4·80	0 59 26·1	140·15	9	14 10 53·98	12 3 8·4	132·65
10	12 41 54·44	1 13 27·0	140·20	10	14 12 53·45	12 16 24·3	132·25
11	12 43 44·17	1 27 28·2	140·25	11	14 14 53·24	12 29 37·8	131·83
12	12 45 34·00	1 41 29·7	140·28	12	14 16 53·37	12 42 48·8	131·42
13	12 47 23·93	1 55 31·4	140·32	13	14 18 53·83	12 55 57·3	130·97
14	12 49 13·97	2 9 33·3	140·33	14	14 20 54·63	13 9 3·1	130·53
15	12 51 4·12	2 23 35·3	140·33	15	14 22 55·77	13 22 6·3	130·07
16	12 52 54·38	2 37 37·3	140·35	16	14 24 57·27	13 35 6·7	129·58
17	12 54 44·77	2 51 39·4	140·33	17	14 26 59·11	13 48 4·2	129·10
18	12 56 35·28	3 5 41·4	140·33	18	14 29 1·31	14 0 58·8	128·62
19	12 58 25·92	3 19 43·4	140·30	19	14 31 3·88	14 13 50·5	128·10
20	13 0 16·70	3 33 45·2	140·27	20	14 33 6·81	14 26 39·1	127·57
21	13 2 7·61	3 47 46·8	140·23	21	14 35 10·12	14 39 24·5	127·03
	13 3 58·67	4 1 48·2	140·18	22	14 37 13·80	14 52 6·7	126·48
	5 49·88	4 15 49·3	140·13	23	14 39 17·86	15 4 45·6	125·93
	7 41·24	S. 4 29 50·1		24	14 41 22·31	S. 15 17 21·2	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 9.		
	h m s	° ′ ″	″
0	14 41 22·31	S. 15 17 21·2	125·35
1	14 43 27·15	15 29 53·3	124·77
2	14 45 32·38	15 42 21·9	124·15
3	14 47 38·01	15 54 46·8	123·55
4	14 49 44·05	16 7 8·1	122·92
5	14 51 50·49	16 19 25·6	122·27
6	14 53 57·35	16 31 39·2	121·62
7	14 56 4·62	16 43 48·9	120·93
8	14 58 12·31	16 55 54·5	120·25
9	15 0 20·42	17 7 56·0	119·55
10	15 2 28·96	17 19 53·3	118·83
11	15 4 37·93	17 31 46·3	118·12
12	15 6 47·34	17 43 35·0	117·37
13	15 8 57·19	17 55 19·2	116·60
14	15 11 7·48	18 6 58·8	115·83
15	15 13 18·22	18 18 33·8	115·03
16	15 15 29·41	18 30 4·0	114·23
17	15 17 41·05	18 41 29·4	113·42
18	15 19 53·15	18 52 49·9	112·58
19	15 22 5·71	19 4 5·4	111·73
20	15 24 18·74	19 15 15·8	110·85
21	15 26 32·23	19 26 20·9	109·98
22	15 28 46·19	19 37 20·8	109·07
23	15 31 0·62	S. 19 48 15·2	108·17
	SATURDAY 10.		
0	15 33 15·53	S. 19 59 4·2	107·23
1	15 35 30·92	20 9 47·6	106·28
2	15 37 46·79	20 20 25·3	105·32
3	15 40 3·14	20 30 57·2	104·33
4	15 42 19·97	20 41 23·2	103·33
5	15 44 37·30	20 51 43·2	102·33
6	15 46 55·11	21 1 57·2	101·30
7	15 49 13·42	21 12 5·0	100·23
8	15 51 32·21	21 22 6·4	99·18
9	15 53 51·50	21 32 1·5	98·10
10	15 56 11·29	21 41 50·1	97·00
11	15 58 31·57	21 51 32·1	95·88
12	16 0 52·35	22 1 7·4	94·75
13	16 3 13·63	22 10 35·9	93·60
14	16 5 35·41	22 19 57·5	92·43
15	16 7 57·68	22 29 12·1	91·23
16	16 10 20·46	22 38 19·5	90·03
17	16 12 43·75	22 47 19·7	88·82
18	16 15 7·53	22 56 12·6	87·58
19	16 17 31·81	23 4 58·1	86·32
20	16 19 56·60	23 13 36·0	85·03
21	16 22 21·88	23 22 6·2	83·75
22	16 24 47·66	23 30 28·7	82·43
23	16 27 13·94	23 38 43·3	81·12
24	16 29 40·71	S. 23 46 50·0	

Hour.	Right Ascension.	Declination.	Diff. for
	SUNDAY 11.		
	h m s	° ′ ″	″
0	16 29 40·71	S. 23 46 50·0	79
1	16 32 7·98	23 54 48·6	78
2	16 34 35·75	24 2 39·0	77
3	16 37 4·01	24 10 21·1	75
4	16 39 32·76	24 17 54·8	74
5	16 42 2·00	24 25 20·0	72
6	16 44 31·73	24 32 36·5	71
7	16 47 1·94	24 39 44·4	69
8	16 49 32·63	24 46 43·5	68
9	16 52 3·79	24 53 33·6	66
10	16 54 35·43	25 0 14·7	65
11	16 57 7·54	25 6 46·7	63
12	16 59 40·11	25 13 9·4	62
13	17 2 13·15	25 19 22·8	60
14	17 4 46·65	25 25 26·8	59
15	17 7 20·60	25 31 21·2	57
16	17 9 54·99	25 37 6·0	55
17	17 12 29·83	25 42 41·1	54
18	17 15 5·11	25 48 6·3	52
19	17 17 40·82	25 53 21·5	50
20	17 20 16·96	25 58 26·7	49
21	17 22 53·52	26 3 21·8	47
22	17 25 30·49	26 8 6·7	45
23	17 28 7·87	S. 26 12 41·3	44
	MONDAY 12.		
0	17 30 45·65	S. 26 17 5·4	42
1	17 33 23·83	26 21 19·0	40
2	17 36 2·40	26 25 22·1	38
3	17 38 41·34	26 29 14·4	36
4	17 41 20·66	26 32 56·0	35
5	17 44 0·34	26 36 26·7	33
6	17 46 40·38	26 39 46·5	31
7	17 49 20·76	26 42 55·3	29
8	17 52 1·48	26 45 53·0	27
9	17 54 42·53	26 48 39·6	25
10	17 57 23·90	26 51 14·9	24
11	18 0 5·59	26 53 38·9	22
12	18 2 47·57	26 55 51·6	20
13	18 5 29·85	26 57 52·8	18
14	18 8 12·42	26 59 42·5	16
15	18 10 55·25	27 1 20·6	14
16	18 13 38·35	27 2 47·1	12
17	18 16 21·70	27 4 1·9	10
18	18 19 5·30	27 5 5·0	8
19	18 21 49·12	27 5 56·2	6
20	18 24 33·17	27 6 35·6	4
21	18 27 17·42	27 7 3·1	2
22	18 30 1·88	27 7 18·6	
23	18 32 46·52	27 7 22	
24	18 35 31·34	S. 27 7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 13.		
	h m s	° ′ ″	″
0	18 35 31·34	S. 27 7 13·7	3·43
1	18 38 16·32	27 6 53·1	5·45
2	18 41 1·46	27 6 20·4	7·47
3	18 43 46·74	27 5 35·6	9·50
4	18 46 32·15	27 4 38·6	11·53
5	18 49 17·68	27 3 29·4	13·57
6	18 52 3·32	27 2 8·0	15·62
7	18 54 49·05	27 0 34·3	17·65
8	18 57 34·87	26 58 48·4	19·68
9	19 0 20·75	26 56 50·3	21·73
10	19 3 6·70	26 54 39·9	23·78
11	19 5 52·69	26 52 17·2	25·83
12	19 8 38·72	26 49 42·2	27·88
13	19 11 24·77	26 46 54·9	29·93
14	19 14 10·84	26 43 55·3	31·97
15	19 16 56·90	26 40 43·5	34·02
16	19 19 42·95	26 37 19·4	36·07
17	19 22 28·98	26 33 43·0	38·10
18	19 25 14·97	26 29 54·4	40·13
19	19 28 0·92	26 25 53·6	42·17
20	19 30 46·81	26 21 40·6	44·18
21	19 33 32·62	26 17 15·5	46·23
22	19 36 18·35	26 12 38·1	48·23
23	19 39 3·99	S. 26 7 48·7	50·25
	WEDNESDAY 14.		
0	19 41 49·53	S. 26 2 47·2	52·27
1	19 44 34·95	25 57 33·6	54·27
2	19 47 20·24	25 52 8·0	56·25
3	19 50 5·39	25 46 30·5	58·23
4	19 52 50·39	25 40 41·1	60·22
5	19 55 35·23	25 34 39·8	62·18
6	19 58 19·91	25 28 26·7	64·13
7	20 1 4·40	25 22 1·9	66·08
8	20 3 48·70	25 15 25·4	68·02
9	20 6 32·81	25 8 37·3	69·95
10	20 9 16·71	25 1 37·6	71·87
11	20 12 0·38	24 54 26·4	73·77
12	20 14 43·83	24 47 3·8	75·67
13	20 17 27·04	24 39 29·8	77·53
14	20 20 10·01	24 31 44·6	79·40
15	20 22 52·72	24 23 48·2	81·25
16	20 25 35·17	24 15 40·7	83·10
17	20 28 17·35	24 7 22·1	84·92
18	20 30 59·25	23 58 52·6	86·73
19	20 33 40·86	23 50 12·2	88·52
20	20 36 22·17	23 41 21·1	90·28
21	20 39 3·19	23 32 19·4	92·07
	20 41 43·90	23 23 7·0	93·82
	24·29	23 13 44·1	95·53
	36	S. 23 4 10·9	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 15.		
	h m s	° ′ ″	″
0	20 47 4·36	S. 23 4 10·9	97·25
1	20 49 44·10	22 54 27·4	98·95
2	20 52 23·50	22 44 33·7	100·63
3	20 55 2·56	22 34 29·9	102·28
4	20 57 41·27	22 24 16·2	103·93
5	21 0 19·63	22 13 52·6	105·55
6	21 2 57·64	22 3 19·3	107·15
7	21 5 35·28	21 52 36·4	108·73
8	21 8 12·55	21 41 44·0	110·30
9	21 10 49·45	21 30 42·2	111·83
10	21 13 25·98	21 19 31·2	113·37
11	21 16 2·13	21 8 11·0	114·88
12	21 18 37·89	20 56 41·7	116·35
13	21 21 13·27	20 45 3·6	117·82
14	21 23 48·25	20 33 16·7	119·27
15	21 26 22·84	20 21 21·1	120·68
16	21 28 57·04	20 9 17·0	122·08
17	21 31 30·84	19 57 4·5	123·45
18	21 34 4·25	19 44 43·8	124·82
19	21 36 37·25	19 32 14·9	126·15
20	21 39 9·84	19 19 38·0	127·47
21	21 41 42·03	19 6 53·2	128·77
22	21 44 13·81	18 54 0·6	130·02
23	21 46 45·19	S. 18 41 0·5	131·28
	FRIDAY 16.		
0	21 49 16·16	S. 18 27 52·8	132·50
1	21 51 46·71	18 14 37·8	133·70
2	21 54 16·86	18 1 15·6	134·88
3	21 56 46·59	17 47 46·3	136·05
4	21 59 15·92	17 34 10·0	137·18
5	22 1 44·83	17 20 26·9	138·28
6	22 4 13·33	17 6 37·2	139·38
7	22 6 41·42	16 52 40·9	140·45
8	22 9 9·10	16 38 38·2	141·50
9	22 11 36·37	16 24 29·2	142·52
10	22 14 3·23	16 10 14·1	143·52
11	22 16 29·68	15 55 53·0	144·50
12	22 18 55·73	15 41 26·0	145·45
13	22 21 21·37	15 26 53·3	146·38
14	22 23 46·61	15 12 15·0	147·28
15	22 26 11·45	14 57 31·3	148·18
16	22 28 35·89	14 42 42·2	149·03
17	22 30 59·94	14 27 48·0	149·87
18	22 33 23·59	14 12 48·8	150·70
19	22 35 46·84	13 57 44·6	151·48
20	22 38 9·71	13 42 35·7	152·27
21	22 40 32·19	13 27 22·1	153·00
22	22 42 54·29	13 12 4·1	153·73
23	22 45 16·00	12 56 41·7	154·45
24	22 47 37·33	S. 12 41 15·0	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff for
	SATURDAY 17.				*MONDAY* 19.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	22 47 37·33	S. 12 41 15·0	155·12	0	0 34 32·76	N. 0 21 57·3	164
1	22 49 58·29	12 25 44·3	155·78	1	0 36 40·59	0 38 21·9	163
2	22 52 18·88	12 10 9·6	156·42	2	0 38 48·27	0 54 45·0	163
3	22 54 39·10	11 54 31·1	157·03	3	0 40 55·80	1 11 6·5	163
4	22 56 58·96	11 38 48·9	157·63	4	0 43 3·18	1 27 26·4	163
5	22 59 18·45	11 23 3·1	158·20	5	0 45 10·41	1 43 44·5	162
6	23 1 37·58	11 7 13·9	158·75	6	0 47 17·51	2 0 0·8	162
7	23 3 56·36	10 51 21·4	159·27	7	0 49 24·48	2 16 15·2	162
8	23 6 14·78	10 35 25·8	159·78	8	0 51 31·32	2 32 27·5	161
9	23 8 32·86	10 19 27·1	160·28	9	0 53 38·03	2 48 37·8	161
10	23 10 50·59	10 3 25·4	160·73	10	0 55 44·63	3 4 45·8	160
11	23 13 7·98	9 47 21·0	161·18	11	0 57 51·11	3 20 51·6	160
12	23 15 25·03	9 31 13·9	161·60	12	0 59 57·49	3 36 55·1	160
13	23 17 41·75	9 15 4·3	162·02	13	1 2 3·76	3 52 56·1	159
14	23 19 58·14	8 58 52·2	162·38	14	1 4 9·94	4 8 54·6	159
15	23 22 14·21	8 42 37·9	162·75	15	1 6 16·02	4 24 50·6	158
16	23 24 29·96	8 26 21·4	163·08	16	1 8 22·01	4 40 43·8	158
17	23 26 45·39	8 10 2·9	163·42	17	1 10 27·91	4 56 34·3	157
18	23 29 0·51	7 53 42·4	163·72	18	1 12 33·73	5 12 22·0	157
19	23 31 15·32	7 37 20·1	163·98	19	1 14 39·48	5 28 6·8	156
20	23 33 29·84	7 20 56·2	164·25	20	1 16 45·16	5 43 48·6	156
21	23 35 44·05	7 4 30·7	164·48	21	1 18 50·77	5 59 27·3	155
22	23 37 57·97	6 48 3·8	164·72	22	1 20 56·31	6 15 3·0	155
23	23 40 11·60	S. 6 31 35·5	164·92	23	1 23 1·80	N. 6 30 35·4	154
	SUNDAY 18.				*TUESDAY* 20.		
0	23 42 24·95	S. 6 15 6·0	165·10	0	1 25 7·23	N. 6 46 4·5	154
1	23 44 38·02	5 58 35·4	165·25	1	1 27 12·61	7 1 30·3	153
2	23 46 50·82	5 42 3·9	165·40	2	1 29 17·95	7 16 52·6	153
3	23 49 3·35	5 25 31·5	165·53	3	1 31 23·25	7 32 11·5	153
4	23 51 15·61	5 8 58·3	165·63	4	1 33 28·51	7 47 26·8	153
5	23 53 27·61	4 52 24·5	165·72	5	1 35 33·74	8 2 38·5	153
6	23 55 39·35	4 35 50·2	165·80	6	1 37 38·94	8 17 46·5	153
7	23 57 50·85	4 19 15·4	165·83	7	1 39 44·12	8 32 50·7	153
8	0 0 2·10	4 2 40·4	165·88	8	1 41 49·27	8 47 51·1	152
9	0 2 13·11	3 46 5·1	165·88	9	1 43 54·41	9 2 47·6	152
10	0 4 23·89	3 29 29·8	165·90	10	1 45 59·54	9 17 40·2	152
11	0 6 34·43	3 12 54·4	165·87	11	1 48 4·66	9 32 28·7	152
12	0 8 44·75	2 56 19·2	165·83	12	1 50 9·77	9 47 13·2	152
13	0 10 54·85	2 39 44·2	165·77	13	1 52 14·89	10 1 53·5	152
14	0 13 4·73	2 23 9·6	165·72	14	1 54 20·01	10 16 29·6	152
15	0 15 14·40	2 6 35·3	165·62	15	1 56 25·13	10 31 1·5	152
16	0 17 23·87	1 50 1·6	165·52	16	1 58 30·27	10 45 29·0	152
17	0 19 33·13	1 33 28·5	165·38	17	2 0 35·43	10 59 52·1	152
18	0 21 42·20	1 16 56·2	165·27	18	2 2 40·60	11 14 10·8	152
19	0 23 51·08	1 0 24·6	165·10	19	2 4 45·79	11 28 24·9	152
20	0 25 59·77	0 43 54·0	164·93	20	2 6 51·01	11 42 34·5	152
21	0 28 8·27	0 27 24·4	164·73	21	2 8 56·25	11 56 39·5	152
22	0 30 16·61	S. 0 10 56·0	164·55	22	2 11 1·53	12 10 39·8	...
23	0 32 24·77	N 0 5 31·3	164·33	23	2 13 6·85	12 24 ·	
24	0 34 32·76	N. 0 21 57·3		24	2 15 12·20	N. 12 38	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 21.		
	h m s	° ′ ″	″
0	2 15 12·20	N.12 38 26·0	137·65
1	2 17 17·60	12 52 11·9	136·82
2	2 19 23·04	13 5 52·8	136·00
3	2 21 28·53	13 19 28·8	135·17
4	2 23 34·08	13 32 59·8	134·30
5	2 25 39·68	13 46 25·6	133·47
6	2 27 45·34	13 59 46·4	132·60
7	2 29 51·05	14 13 2·0	131·72
8	2 31 56·83	14 26 12·3	130·83
9	2 34 2·68	14 39 17·3	129·95
10	2 36 8·60	14 52 17·0	129·05
11	2 38 14·59	15 5 11·3	128·15
12	2 40 20·65	15 18 0·2	127·23
13	2 42 26·79	15 30 43·6	126·30
14	2 44 33·01	15 43 21·4	125·38
15	2 46 39·32	15 55 53·7	124·43
16	2 48 45·71	16 8 20·3	123·48
17	2 50 52·19	16 20 41·2	122·53
18	2 52 58·75	16 32 56·4	121·57
19	2 55 5·41	16 45 5·8	120·60
20	2 57 12·16	16 57 9·4	119·62
21	2 59 19·01	17 9 7·1	118·63
22	3 1 25·96	17 20 58·9	117·63
23	3 3 33·00	N.17 32 44·7	116·63
	THURSDAY 22.		
0	3 5 40·15	N.17 44 24·5	115·63
1	3 7 47·40	17 55 58·3	114·60
2	3 9 54·76	18 7 25·9	113·58
3	3 12 2·22	18 18 47·4	112·55
4	3 14 9·79	18 30 2·7	111·52
5	3 16 17·47	18 41 11·8	110·48
6	3 18 25·26	18 52 14·7	109·42
7	3 20 33·16	19 3 11·2	108·35
8	3 22 41·18	19 14 1·3	107·30
9	3 24 49·31	19 24 45·1	106·22
10	3 26 57·56	19 35 22·4	105·15
11	3 29 5·93	19 45 53·3	104·05
12	3 31 14·41	19 56 17·6	102·97
13	3 33 23·01	20 6 35·4	101·87
14	3 35 31·74	20 16 46·6	100·75
15	3 37 40·58	20 26 51·1	99·65
16	3 39 49·54	20 36 49·0	98·53
17	3 41 58·63	20 46 40·2	97·40
18	3 44 7·83	20 56 24·6	96·28
19	3 46 17·16	21 6 2·3	95·13
20	3 48 26·61	21 15 33·1	93·98
21	3 50 36·19	21 24 57·0	92·85
	3 52 45·88	21 34 14·1	91·68
	·a 55·70	21 43 24·2	90·53
	5·65	N.21 52 27·4	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 23.		
	h m s	° ′ ″	″
0	3 57 5·65	N.21 52 27·4	89·37
1	3 59 15·72	22 1 23·6	88·18
2	4 1 25·91	22 10 12·7	87·00
3	4 3 36·22	22 18 54·7	85·83
4	4 5 46·65	22 27 29·7	84·65
5	4 7 57·21	22 35 57·6	83·43
6	4 10 7·88	22 44 18·2	82·25
7	4 12 18·68	22 52 31·7	81·05
8	4 14 29·59	23 0 38·0	79·83
9	4 16 40·63	23 8 37·0	78·62
10	4 18 51·78	23 16 28·7	77·40
11	4 21 3·05	23 24 13·1	76·18
12	4 23 14·44	23 31 50·2	74·95
13	4 25 25·95	23 39 19·9	73·73
14	4 27 37·57	23 46 42·3	72·48
15	4 29 49·30	23 53 57·2	71·23
16	4 32 1·14	24 1 4·6	70·00
17	4 34 13·10	24 8 4·6	68·73
18	4 36 25·17	24 14 57·0	67·48
19	4 38 37·34	24 21 41·9	66·23
20	4 40 49·61	24 28 19·3	64·97
21	4 43 1·99	24 34 49·1	63·70
22	4 45 14·47	24 41 11·3	62·42
23	4 47 27·05	N.24 47 25·8	61·15
	SATURDAY 24.		
0	4 49 39·72	N.24 53 32·7	59·87
1	4 51 52·49	24 59 31·9	58·58
2	4 54 5·36	25 5 23·4	57·30
3	4 56 18·31	25 11 7·2	56·00
4	4 58 31·36	25 16 43·2	54·72
5	5 0 44·49	25 22 11·5	53·42
6	5 2 57·71	25 27 32·0	52·12
7	5 5 11·01	25 32 44·7	50·82
8	5 7 24·39	25 37 49·6	49·52
9	5 9 37·84	25 42 46·7	48·20
10	5 11 51·37	25 47 35·9	46·90
11	5 14 4·97	25 52 17·3	45·58
12	5 16 18·64	25 56 50·8	44·27
13	5 18 32·37	26 1 16·4	42·97
14	5 20 46·17	26 5 34·2	41·63
15	5 23 0·03	26 9 44·0	40·32
16	5 25 13·94	26 13 45·9	39·00
17	5 27 27·91	26 17 39·9	37·67
18	5 29 41·93	26 21 25·9	36·33
19	5 31 55·99	26 25 3·9	35·02
20	5 34 10·09	26 28 34·0	33·68
21	5 36 24·24	26 31 56·1	32·35
22	5 38 38·43	26 35 10·2	31·02
23	5 40 52·64	26 38 16·3	29·68
24	5 43 6·89	N.26 41 14·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. for
	SUNDAY 25.				*TUESDAY* 27.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	5 43 6·89	N.26 41 14·4	28·33	0	7 29 52·29	N.26 27 27·1	3
1	5 45 21·16	26 44 4·4	27·02	1	7 32 3·40	26 23 59·2	3
2	5 47 35·46	26 46 46·5	25·67	2	7 34 14·35	26 20 23·9	3
3	5 49 49·78	26 49 20·5	24·32	3	7 36 25·15	26 16 41·1	3
4	5 52 4·11	26 51 46·4	23·00	4	7 38 35·79	26 12 51·0	3
5	5 54 18·45	26 54 4·4	21·65	5	7 40 46·26	26 8 53·5	4
6	5 56 32·80	26 56 14·3	20·30	6	7 42 56·57	26 4 48·7	4
7	5 58 47·16	26 58 16·1	18·98	7	7 45 6·72	26 0 36·5	4
8	6 1 1·52	27 0 10·0	17·63	8	7 47 16·69	25 56 17·1	4
9	6 3 15·87	27 1 55·8	16·28	9	7 49 26·49	25 51 50·5	4
10	6 5 30·22	27 3 33·5	14·95	10	7 51 36·11	25 47 16·7	4
11	6 7 44·55	27 5 3·2	13·62	11	7 53 45·56	25 42 35·7	4
12	6 9 58·87	27 6 24·9	12·28	12	7 55 54·82	25 37 47·6	4
13	6 12 13·18	27 7 38·6	10·93	13	7 58 3·90	25 32 52·4	5
14	6 14 27·46	27 8 44·2	9·60	14	8 0 12·80	25 27 50·1	5
15	6 16 41·71	27 9 41·8	8·27	15	8 2 21·51	25 22 40·8	5
16	6 18 55·94	27 10 31·4	6·93	16	8 4 30·02	25 17 24·5	5
17	6 21 10·13	27 11 13·0	5·58	17	8 6 38·35	25 12 1·2	5
18	6 23 24·29	27 11 46·5	4·27	18	8 8 46·48	25 6 31·0	5
19	6 25 38·40	27 12 12·1	2·93	19	8 10 54·42	25 0 53·9	5
20	6 27 52·47	27 12 29·7	1·58	20	8 13 2·16	24 55 10·0	5
21	6 30 6·49	27 12 39·2	0·27	21	8 15 9·71	24 49 19·2	5
22	6 32 20·45	27 12 40·8	1·07	22	8 17 17·05	24 43 21·7	6
23	6 34 34·36	N.27 12 34·4	2·38	23	8 19 24·19	N.24 37 17·5	6
	MONDAY 26.				*WEDNESDAY* 28.		
0	6 36 48·21	N.27 12 20·1	3·72	0	8 21 31·12	N.24 31 6·5	6
1	6 39 1·99	27 11 57·8	5·05	1	8 23 37·85	24 24 48·9	6
2	6 41 15·70	27 11 27·5	6·35	2	8 25 44·37	24 18 24·7	6
3	6 43 29·34	27 10 49·4	7·68	3	8 27 50·69	24 11 53·9	6
4	6 45 42·90	27 10 3·3	9·00	4	8 29 56·79	24 5 16·5	6
5	6 47 56·38	27 9 9·3	10·32	5	8 32 2·69	23 58 32·7	6
6	6 50 9·78	27 8 7·4	11·62	6	8 34 8·37	23 51 42·4	6
7	6 52 23·09	27 6 57·7	12·93	7	8 36 13·84	23 44 45·6	7
8	6 54 36·31	27 5 40·1	14·23	8	8 38 19·09	23 37 42·5	7
9	6 56 49·43	27 4 14·7	15·55	9	8 40 24·13	23 30 33·1	7
10	6 59 2·45	27 2 41·4	16·83	10	8 42 28·96	23 23 17·4	7
11	7 1 15·36	27 1 0·4	18·13	11	8 44 33·56	23 15 55·4	7
12	7 3 28·17	26 59 11·6	19·43	12	8 46 37·95	23 8 27·2	7
13	7 5 40·87	26 57 15·0	20·72	13	8 48 42·12	23 0 52·8	7
14	7 7 53·46	26 55 10·7	22·00	14	8 50 46·08	22 53 12·3	7
15	7 10 5·93	26 52 58·7	23·28	15	8 52 49·81	22 45 25·8	7
16	7 12 18·28	26 50 39·0	24·57	16	8 54 53·33	22 37 33·2	7
17	7 14 30·50	26 48 11·6	25·83	17	8 56 56·62	22 29 34·6	8
18	7 16 42·59	26 45 36·6	27·12	18	8 58 59·70	22 21 30·1	8
19	7 18 54·56	26 42 53·9	28·37	19	9 1 2·56	22 13 19·6	8
20	7 21 6·39	26 40 3·7	29·65	20	9 3 5·19	22 5 3·3	8
21	7 23 18·08	26 37 5·8	30·90	21	9 5 7·61	21 56	
22	7 25 29·63	26 34 0·4	32·15	22	9 7 9·81	21 4	
23	7 27 41·03	26 30 47·5	33·40	23	9 9 11·79		
24	7 29 52·29	N.26 27 27·1		24	9 11 13·55		

MEAN TIME.

PHASES OF THE MOON.

		d	h	m
○	Full Moon	1	15	41·3
☾	*Last Quarter*	9	15	0·1
●	New Moon	16	6	47·5
☽	*First Quarter*	23	5	33·7

		d	h
☾	Apogee	1	2
☾	Perigee	15	14
☾	Apogee	28	8

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Arietis W.	88 33 46	3153	90 0 52	3152	91 27 59	3151	92 55 7	3
	Aldebaran W.	58 6 20	3118	59 34 8	3115	61 1 59	3114	62 29 51	3
	Saturn W.	56 21 47	3078	57 50 24	3076	59 19 3	3076	60 47 42	3
	Pollux W.	13 51 14	3124	15 18 54	3115	16 46 46	3107	18 14 47	3
	Spica ♍ E.	77 1 48	3084	75 33 19	3084	74 4 50	3083	72 36 20	3
	Antares E.	122 55 16	3078	121 26 40	3079	119 58 5	3078	118 29 28	3
2	α Arietis W.	100 10 54	3148	101 38 6	3147	103 5 19	3146	104 32 33	3
	Aldebaran W.	69 49 47	3102	71 17 54	3100	72 46 4	3098	74 14 16	3
	Saturn W.	68 11 16	3068	69 40 5	3066	71 8 56	3065	72 37 48	3
	Pollux W.	25 36 22	3081	27 4 55	3077	28 33 33	3074	30 2 14	3
	Spica ♍ E.	65 13 41	3078	63 45 5	3078	62 16 28	3076	60 47 49	3
	Antares E.	111 6 6	3070	109 37 20	3068	108 8 31	3067	106 39 41	3
3	Aldebaran W.	81 36 7	3082	83 4 39	3078	84 33 15	3075	86 1 55	3
	Saturn W.	80 2 52	3051	81 32 2	3048	83 1 15	3045	84 30 32	3
	Pollux W.	37 26 37	3055	38 55 42	3052	40 24 50	3048	41 54 3	3
	Spica ♍ E.	53 24 4	3065	51 55 12	3063	50 26 17	3061	48 57 20	3
	Antares E.	99 14 47	3052	97 45 39	3049	96 16 27	3046	94 47 11	3
4	Aldebaran W.	93 26 21	3052	94 55 29	3048	96 24 42	3044	97 54 0	3
	Saturn W.	91 58 2	3023	93 27 46	3018	94 57 36	3014	96 27 31	3
	Pollux W.	49 21 21	3024	50 51 4	3018	52 20 54	3014	53 50 49	3
	Regulus W.	13 35 46	3244	15 1 3	3200	16 27 12	3165	17 54 3	3
	Spica ♍ E.	41 31 48	3046	40 2 32	3043	38 33 13	3040	37 3 50	3
	Antares E.	87 19 47	3024	85 50 4	3019	84 20 15	3014	82 50 20	3
5	Aldebaran W.	105 21 58	3015	106 51 52	3009	108 21 54	3004	109 52 2	2
	Saturn W.	103 58 38	2983	105 29 12	2977	106 59 53	2971	108 30 42	2
	Pollux W.	61 22 2	2981	62 52 38	2975	64 23 22	2969	65 54 14	2
	Regulus W.	25 15 14	3047	26 44 29	3034	28 14 0	3022	29 43 46	3
	Spica ♍ E.	29 36 12	3028	28 6 34	3027	26 36 55	3026	25 7 15	3
	Antares E.	75 19 13	2983	73 48 39	2977	72 17 57	2971	70 47 8	2
6	Saturn W.	116 6 53	2930	117 38 34	2921	119 10 26	2914	120 42 27	2
	Pollux W.	73 30 48	2925	75 2 35	2916	76 34 33	2908	78 6 42	2
	Regulus W.	37 16 5	2956	38 47 13	2946	40 18 33	2935	41 50 7	2
	Antares E.	63 10 50	2928	61 39 7	2920	60 7 13	2912	58 35 9	2
	α Aquilæ E.	109 35 31	3860	108 21 31	3836	107 7 6	3812	105 52 16	3
	Sun E.	132 6 11	3327	130 42 31	3317	129 18 39	3307	127 54 36	3
7	Pollux W.	85 50 23	2851	87 23 45	2840	88 57 21	2830	90 31 10	2
	Regulus W.	49 31 21	2870	51 4 18	2859	52 37 30	2847	54 10 57	2
	Antares E.	50 51 57	2856	49 18 42	2847	47 45 15	2836	46 11 34	2
	α Aquilæ E.	99 32 35	3691	98 15 38	3675	96 58 24	3658	95 40 52	3
	Sun E.	120 51 6	3240	119 25 44	3227	118 0 7	3215	116 34 16	3
8	Pollux W.	98 24 3	2759	99 59 25	2746	101 35 4	2733	103 11 0	2
	Regulus W.	62 2 8	2772	63 37 13	2759	65 12 34	2745	66 48 14	2
	Antares E.	38 19 35	2769	36 44 27	2757	35 9 3	2745	33 33 23	2
	α Aquilæ E.	89 9 15	3575	87 50 13	3563	86 31 9	3554	85 11 36	3
	Sun E.	109 21 8	3136	107 53 42	3121	106		104 57 56	3
9	Pollux W.	111 15 18	2649	112 53 7	2633				

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Arietis	W.	94 22 15	3151	95 49 23	3150	97 16 32	3149	98 43 42	3148
	Aldebaran	W.	63 57 45	3110	65 25 42	3109	66 53 41	3106	68 21 43	3105
	Saturn	W.	62 16 22	3074	63 45 3	3073	65 13 46	3072	66 42 30	3070
	Pollux	W.	19 42 55	3096	21 11 9	3092	22 39 29	3088	24 7 53	3084
	Spica ♍	E.	71 7 50	3083	69 39 20	3082	68 10 48	3081	66 42 15	3080
	Antares	E.	117 0 51	3076	115 32 12	3074	114 3 31	3073	112 34 49	3073
2	α Arietis	W.	105 59 48	3143	107 27 5	3143	108 54 22	3143	110 21 40	3142
	Aldebaran	W.	75 42 32	3092	77 10 51	3090	78 39 13	3087	80 7 38	3084
	Saturn	W.	74 6 44	3061	75 35 41	3058	77 4 42	3056	78 33 45	3053
	Pollux	W.	31 30 59	3068	32 59 48	3065	34 28 40	3061	35 57 37	3059
	Spica ♍	E.	59 19 8	3073	57 50 25	3072	56 21 41	3069	54 52 54	3067
	Antares	E.	105 10 47	3063	103 41 52	3060	102 12 53	3058	100 43 52	3055
3	Aldebaran	W.	87 30 40	3069	88 59 28	3065	90 28 21	3061	91 57 19	3057
	Saturn	W.	85 59 53	3038	87 29 19	3035	88 58 48	3031	90 28 23	3027
	Pollux	W.	43 23 21	3040	44 52 44	3037	46 22 11	3033	47 51 43	3028
	Spica ♍	E.	47 28 20	3056	45 59 16	3054	44 30 10	3051	43 1 1	3048
	Antares	E.	93 17 52	3039	91 48 27	3036	90 18 59	3032	88 49 26	3027
4	Aldebaran	W.	99 23 23	3035	100 52 53	3030	102 22 28	3025	103 52 10	3020
	Saturn	W.	97 57 32	3005	99 27 39	3000	100 57 52	2994	102 28 12	2989
	Pollux	W.	55 20 50	3004	56 50 58	2999	58 21 12	2993	59 51 33	2987
	Regulus	W.	19 21 28	3114	20 49 21	3094	22 17 38	3076	23 46 17	3061
	Spica ♍	E.	35 34 24	3035	34 4 55	3034	32 35 24	3031	31 5 49	3029
	Antares	E.	81 20 20	3005	79 50 13	3000	78 20 0	2994	76 49 40	2989
5	Aldebaran	W.	111 22 18	2992	112 52 41	2985	114 23 12	2978	115 53 52	2973
	Saturn	W.	110 1 39	2958	111 32 44	2951	113 3 58	2944	114 35 21	2937
	Pollux	W.	67 25 15	2955	68 56 24	2948	70 27 42	2940	71 59 10	2932
	Regulus	W.	31 13 47	2999	32 44 1	2988	34 14 29	2977	35 45 10	2966
	Spica ♍	E.	23 37 36	3029	22 7 59	3034	20 38 28	3039	19 9 3	3048
	Antares	E.	69 16 10	2957	67 45 4	2950	66 13 48	2943	64 42 24	2935
6	Saturn	W.	122 14 40	2897	123 47 3	2887	125 19 38	2879	126 52 24	2870
	Pollux	W.	79 39 2	2890	81 11 34	2880	82 44 18	2871	84 17 14	2861
	Regulus	W.	43 21 55	2914	44 53 56	2904	46 26 10	2892	47 58 39	2882
	Antares	E.	57 2 54	2894	55 30 27	2885	53 57 49	2876	52 25 0	2866
	α Aquilæ	E.	104 37 3	3768	103 21 27	3747	102 5 30	3727	100 49 12	3709
	Sun	E.	126 30 20	3285	125 5 51	3274	123 41 9	3263	122 16 14	3252
7	Pollux	W.	92 5 14	2807	93 39 33	2795	95 14 7	2783	96 48 57	2771
	Regulus	W.	55 44 39	2823	57 18 37	2811	58 52 51	2798	60 27 21	2785
	Antares	E.	44 37 39	2814	43 3 29	2804	41 29 6	2792	39 54 28	2781
	α Aquilæ	E.	94 23 2	3627	93 4 57	3613	91 46 37	3600	90 28 3	3587
	Sun	E.	115 8 10	3190	113 41 49	3176	112 15 11	3163	110 48 18	3149
8	Pollux	W.	104 47 15	2706	106 23 47	2692	108 0 38	2677	109 37 49	2663
	Regulus	W.	68 24 12	2718	70 0 28	2703	71 37 4	2689	73 13 59	2675
	Antares	E.	31 57 27	2722	30 21 16	2709	28 44 48	2697	27 8 4	2686
	α Aquilæ	E.	83 52 1	3536	82 32 17	3528	81 12 24	3521	79 52 23	3515
	Sun	E.	103 29 37	3076	102 0 58	3061	100 32 1	3046	99 2 45	3030
	[illegible]llux	W.	117 48 38	2588	119 27 50	2572	121 7 24	2556	122 47 20	2540

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.		*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Regulus	W.	74 51 13	2659	76 28 48	2643	78 6 44	2629	79 45 0	2
	Spica ♍	W.	20 59 30	2731	22 35 29	2705	24 12 3	2680	25 49 9	2
	Antares	E.	25 31 5	2674	23 53 50	2663	22 16 20	2653	20 38 37	2
	α Aquilæ	E.	78 32 16	3511	77 12 4	3507	75 51 48	3505	74 31 29	3
	Sun	E.	97 33 9	3014	96 3 13	2998	94 32 57	2981	93 2 20	2
10	Regulus	W.	88 1 45	2532	89 42 13	2515	91 23 5	2499	93 4 19	2
	Spica ♍	W.	34 2 1	2555	35 41 58	2535	37 22 22	2516	39 3 13	3
	α Aquilæ	E.	67 50 12	3523	66 30 13	3533	65 10 25	3545	63 50 50	3
	Sun	E.	85 23 53	2877	83 51 4	2859	82 17 53	2841	80 44 19	2
11	Regulus	W.	101 36 26	2398	103 20 3	2381	105 4 5	2365	106 48 30	
	Spica ♍	W.	47 34 0	2405	49 17 27	2387	51 1 21	2369	52 45 41	
	α Aquilæ	E.	57 18 5	3684	56 1 1	3722	54 44 37	3766	53 28 59	
	Sun	E.	72 50 35	2732	71 14 38	2715	69 38 18	2697	68 1 34	
12	Regulus	W.	115 36 39	2266	117 23 28	2251	119 10 40	2235	120 58 15	
	Spica ♍	W.	61 33 41	2264	63 20 33	2248	65 7 49	2232	66 55 29	
	Antares	W.	15 44 53	2313	17 30 34	2285	19 16 56	2261	21 3 53	
	α Aquilæ	E.	47 26 2	4187	46 17 24	4295	45 10 27	4417	44 5 21	
	Sun	E.	59 51 54	2592	58 12 48	2575	56 33 19	2559	54 53 28	
13	Spica ♍	W.	75 59 41	2141	77 49 38	2127	79 39 56	2114	81 30 34	
	Antares	W.	30 6 12	2147	31 55 59	2132	33 46 9	2118	35 36 41	
	Sun	E.	46 28 53	2471	44 46 59	2458	43 4 47	2446	41 22 18	
14	Spica ♍	W.	90 48 23	2046	92 40 46	2036	94 33 24	2028	96 26 15	
	Antares	W.	44 54 25	2044	46 46 51	2034	48 39 32	2025	50 32 28	
18	Sun	W.	24 28 17	2505	26 9 23	2510	27 50 23	2517	29 31 12	
	α Arietis	E.	44 14 27	2276	42 27 53	2303	40 41 58	2332	38 56 45	
	Aldebaran	E.	73 59 52	2146	72 10 3	2162	70 20 38	2177	68 31 35	
	Saturn	E.	75 26 59	2122	73 36 33	2136	71 46 29	2151	69 56 47	
	Pollux	E.	117 59 0	2111	116 8 18	2126	114 17 58	2140	112 27 59	
19	Sun	W.	37 51 30	2592	39 30 36	2608	41 9 20	2625	42 47 41	
	α Pegasi	W.	27 48 18	4898	28 46 34	4615	29 48 46	4379	30 54 26	
	α Arietis	E.	30 23 22	2574	28 43 51	2632	27 5 40	2699	25 28 59	
	Aldebaran	E.	59 32 43	2283	57 46 18	2302	56 0 21	2322	54 14 54	
	Saturn	E.	60 54 21	2250	59 7 8	2268	57 20 22	2287	55 34 3	
	Pollux	E.	103 24 0	2237	101 36 27	2254	99 49 20	2272	98 2 39	
20	Sun	W.	50 53 27	2735	52 29 20	2754	54 4 48	2773	55 39 51	
	α Pegasi	W.	37 1 15	3582	38 20 9	3512	39 40 20	3453	41 1 37	
	Aldebaran	E.	45 35 16	2453	43 52 56	2477	42 11 10	2502	40 29 59	
	Saturn	E.	46 49 24	2403	45 5 53	2423	43 22 51	2443	41 40 18	
	Pollux	E.	89 15 56	2383	87 31 57	2403	85 48 26	2422	84 5 22	
	Regulus	E.	125 36 58	2400	123 53 24	2418	122 10 15	2437	120 27 33	
21	Sun	W.	63 28 33	2893	65 1 1	2914	66 33 2	2933	68 4 39	
	α Pegasi	W.	47 59 38	3251	49 24 47	3235	50 50 15	3222	52 15 58	
	Aldebaran	E.	32 13 11	2668	30 35 48	2701	28 59 10	2736	27 23 18	
	Saturn	E.	33 14 51	2570	31 35 15	2591	29 56 8	2614	28 17 32	
	Pollux	E.	75 36 48	2536	73 56 25	2556	72 16 29	2574	70 36 58	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Regulus	W.	81 23 37	2597	83 2 36	2581	84 41 57	2565	86 21 40	2549
	Spica ♍	W.	27 26 46	2635	29 4 53	2615	30 43 28	2594	32 22 31	2574
	Antares	E.	19 0 41	2635	17 22 34	2631	15 44 21	2629	14 6 6	2633
	α Aquilæ	E.	73 11 10	3504	71 50 50	3506	70 30 33	3510	69 10 20	3515
	Sun	E.	91 31 22	2947	90 0 3	2929	88 28 ?1	2912	86 56 18	2895
10	Regulus	W.	94 45 57	2466	96 27 58	2448	98 10 24	2432	99 53 13	2415
	Spica ♍	W.	40 44 30	2479	42 26 13	2460	44 8 23	2442	45 50 58	2423
	α Aquilæ	E.	62 31 31	3577	61 12 32	3598	59 53 55	3622	58 35 45	3650
	Sun	E.	79 10 22	2805	77 36 0	2788	76 1 16	2769	74 26 7	2751
11	Regulus	W.	108 33 20	2331	110 18 34	2315	112 4 12	2298	113 50 14	2283
	Spica ♍	W.	54 30 26	2333	56 15 37	2316	58 1 13	2298	59 47 15	2282
	α Aquilæ	E.	52 14 13	3872	51 0 25	3936	49 47 42	4009	48 36 11	4092
	Sun	E.	66 24 25	2661	64 46 53	2643	63 8 57	2626	61 30 37	2609
12	Regulus	W.	122 46 11	2206	124 34 30	2192	126 23 10	2178	128 12 11	2164
	Spica ♍	W.	68 43 34	2200	70 32 1	2184	72 20 52	2169	74 10 6	2155
	Antares	W.	22 51 24	2218	24 39 24	2198	26 27 54	2181	28 16 50	2164
	α Aquilæ	E.	43 2 18	4714	42 1 30	4895	41 3 11	5102	40 7 35	5340
	Sun	E.	53 13 15	2527	51 32 40	2512	49 51 44	2499	48 10 29	2484
13	Spica ♍	W	83 21 32	2088	85 12 49	2077	87 4 23	2066	88 56 15	2055
	Antares	W.	37 27 35	2090	39 18 50	2078	41 10 23	2066	43 2 15	2054
	Sun	E.	39 39 34	2425	37 56 35	2416	36 13 23	2408	34 29 59	2401
14	Spica ♍	W.	98 19 18	2013	100 12 32	2006	102 5 57	2001	103 59 30	1996
	Antares	W.	52 25 36	2009	54 18 57	2002	56 12 28	1996	58 6 9	1990
18	Sun	W.	31 11 49	2537	32 52 11	2549	34 32 16	2562	36 12 3	2577
	α Arietis	E.	37 12 17	2397	35 28 38	2434	33 45 52	2476	32 4 5	2522
	Aldebaran	E.	66 42 57	2210	64 54 44	2227	63 6 57	2245	61 19 37	2263
	Saturn	E.	68 7 29	2182	66 18 34	2198	64 30 4	2215	62 41 59	2233
	Pollux	E.	110 38 23	2171	108 49 11	2186	107 0 23	2202	105 11 59	2219
19	Sun	W.	44 25 39	2660	46 3 13	2678	47 40 23	2697	49 17 7	2715
	α Pegasi	W.	32 3 9	4018	33 14 31	3880	34 28 11	3764	35 43 51	3665
	α Arietis	E.	23 54 1	2869	22 21 2	2979	20 50 23	3113	19 22 29	3278
	Aldebaran	E.	52 29 56	2364	50 45 29	2385	49 1 33	2407	47 18 8	2430
	Saturn	E.	53 48 11	2324	52 2 47	2344	50 17 51	2363	48 33 23	2383
	Pollux	E.	96 16 25	2308	94 30 37	2326	92 45 16	2345	91 0 22	2364
20	Sun	W.	57 14 27	2814	58 48 37	2833	60 22 22	2854	61 55 40	2873
	α Pegasi	W.	42 23 51	3360	43 46 53	3325	45 10 35	3295	46 34 52	3271
	Aldebaran	E.	38 49 23	2553	37 9 23	2580	35 30 0	2607	33 51 15	2637
	Saturn	E.	39 58 14	2485	38 16 39	2506	36 35 34	2527	34 54 58	2548
	Pollux	E.	82 22 45	2460	80 40 35	2479	78 58 52	2499	77 17 37	2517
	Regulus	E.	118 45 16	2474	117 3 26	2493	115 22 3	2511	113 41 5	2530
21	Sun	W.	69 35 51	2973	71 6 38	2992	72 37 1	3010	74 7 1	3030
	α Pegasi	W.	53 41 53	3205	55 7 56	3199	56 34 6	3196	58 0 20	3195
	Aldebaran	E.	25 48 17	2817	24 14 11	2863	22 41 4	2916	21 9 6	2977
	Saturn	E.	26 39 26	2660	25 1 52	2684	23 24 50	2709	21 48 22	2735
	P[illegible]		68 57 54	2611	67 19 14	2630	65 41 0	2648	64 3 10	2666

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
21	Regulus	E.	112 0 34	2548	110 20 28	2567	108 40 48	2586	107 1 34	2
22	Sun	W.	75 36 36	3048	77 5 49	3068	78 34 38	3086	80 3 5	3
	α Pegasi	W.	59 26 35	3195	60 52 50	3196	62 19 4	3198	63 45 15	3
	α Arietis	W.	16 24 59	3829	17 39 31	3659	18 57 2	3529	20 16 54	3
	Saturn	E.	20 12 29	2763	18 37 13	2795	17 2 38	2830	15 28 49	2
	Pollux	E.	62 25 44	2684	60 48 42	2701	59 12 3	2718	57 35 47	2
	Regulus	E.	98 51 31	2694	97 14 43	2711	95 38 17	2727	94 2 13	2
23	Sun	W.	87 20 4	3188	88 46 27	3204	90 12 32	3220	91 38 18	3
	α Pegasi	W.	70 54 47	3231	72 20 20	3239	73 45 43	3246	75 10 58	3
	α Arietis	W.	27 17 0	3188	28 43 24	3167	30 10 13	3150	31 37 22	3
	Pollux	E.	49 39 53	2814	48 5 44	2829	46 31 54	2844	44 58 23	2
	Regulus	E.	86 7 18	2823	84 33 20	2838	82 59 41	2852	81 26 21	2
24	Sun	W.	98 42 52	3304	100 6 59	3316	101 30 52	3329	102 54 30	3
	α Pegasi	W.	82 14 43	3298	83 38 57	3307	85 3 0	3316	86 26 53	3
	α Arietis	W.	38 55 47	3112	40 23 42	3112	41 51 37	3112	43 19 32	3
	Aldebaran	W.	10 5 40	4343	11 11 53	4013	12 23 20	3787	13 38 36	3
	Pollux	E.	37 15 14	2924	35 43 25	2936	34 11 52	2948	32 40 34	2
	Regulus	E.	73 43 59	2930	72 12 18	2942	70 40 53	2954	69 9 42	2
25	Sun	W.	109 49 32	3392	111 11 58	3401	112 34 14	3409	113 56 20	3
	α Pegasi	W.	93 23 32	3373	94 46 19	3383	96 8 55	3393	97 31 20	3
	α Arietis	W.	50 38 35	3124	52 6 15	3128	53 33 51	3130	55 1 24	3
	Aldebaran	W.	20 24 54	3288	21 49 19	3261	23 14 16	3239	24 39 39	3
	Saturn	W.	17 42 34	3090	19 10 56	3087	20 39 21	3085	22 7 49	3
	Pollux	E.	25 7 31	3013	23 37 34	3022	22 7 49	3033	20 38 17	3
	Regulus	E.	61 37 3	3013	60 7 6	3022	58 37 20	3030	57 7 45	3
	Spica ♍	E.	115 39 56	3009	114 9 55	3017	112 40 3	3025	111 10 21	3
26	Sun	W.	120 44 40	3452	122 5 58	3457	123 27 10	3463	124 48 15	3
	α Pegasi	W.	104 20 34	3454	105 41 50	3464	107 2 54	3475	108 23 46	3
	α Arietis	W.	62 18 15	3147	63 45 28	3149	65 12 38	3151	66 39 46	3
	Aldebaran	W.	31 50 32	3175	33 17 11	3170	34 43 56	3167	36 10 45	3
	Saturn	W.	29 29 53	3093	30 58 11	3095	32 26 27	3098	33 54 39	3
	Regulus	E.	49 42 4	3072	48 13 20	3078	46 44 43	3083	45 16 13	3
	Spica ♍	E.	103 43 47	3060	102 14 49	3065	100 45 56	3069	99 17 9	3
27	α Pegasi	W.	115 4 52	3548	116 24 23	3562	117 43 39	3577	119 2 39	3
	α Arietis	W.	73 54 55	3159	75 21 53	3160	76 48 50	3160	78 15 47	3
	Aldebaran	W.	43 25 46	3150	44 52 55	3149	46 20 5	3146	47 47 19	3
	Saturn	W.	41 15 10	3107	42 43 11	3107	44 11 12	3109	45 39 11	3
	Regulus	E.	37 55 15	3112	36 27 20	3117	34 59 31	3121	33 31 47	3
	Spica ♍	E.	91 54 14	3087	90 25 48	3088	88 57 24	3090	87 29 2	3
28	α Arietis	W.	85 30 32	3158	86 57 31	3157	88 24 32	3157	89 51 33	3
	Aldebaran	W.	55 4 2	3133	56 31 31	3131	57 59 3	3128	59 26 38	3
	Saturn	W.	52 59 7	3106	54 27 9	3106	55 55 11	3104	57 23 16	3
	Regulus	E.	26 14 33	3153	24 47 27	3160	23 20 30	3169	21 53 44	3
	Spica ♍	E.	80 7 26	3092	78 39 6	3092	77 10 46	3091	75 42 25	3

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
21	Regulus	E.	105 22 44	2623	103 44 20	2641	102 6 20	2658	100 28 44	2675
22	Sun	W.	81 31 11	3121	82 58 55	3138	84 26 18	3155	85 53 21	3172
	α Pegasi	W.	65 11 22	3207	66 37 23	3212	68 3 18	3218	69 29 6	3224
	α Arietis	W.	21 38 36	3355	23 1 44	3296	24 26 0	3251	25 51 9	3215
	Saturn	E.	13 55 53	2920	12 24 0	2983	10 53 26	3071	9 24 41	3199
	Pollux	E.	55 59 53	2751	54 24 21	2768	52 49 11	2784	51 14 22	2799
	Regulus	E.	92 26 32	2760	90 51 12	2777	89 16 14	2792	87 41 36	2808
23	Sun	W.	93 3 46	3249	94 28 57	3264	95 53 51	3277	97 18 29	3290
	α Pegasi	W.	76 36 3	3263	78 0 58	3271	79 25 44	3280	80 50 19	3289
	α Arietis	W.	33 4 46	3128	34 32 22	3122	36 0 5	3117	37 27 54	3114
	Pollux	E.	43 25 11	2872	41 52 16	2885	40 19 38	2899	38 47 18	2912
	Regulus	E.	79 53 19	2880	78 20 34	2892	76 48 5	2906	75 15 54	2919
24	Sun	W.	104 17 55	3351	105 41 8	3362	107 4 8	3372	108 26 56	3383
	α Pegasi	W.	87 50 35	3335	89 14 6	3345	90 37 26	3355	92 0 34	3364
	α Arietis	W.	44 47 26	3115	46 15 17	3117	47 43 6	3119	49 10 52	3122
	Aldebaran	W.	14 56 38	3516	16 16 44	3433	17 38 23	3372	19 1 12	3325
	Pollux	E.	31 9 30	2970	29 38 40	2981	28 8 4	2992	26 37 41	3002
	Regulus	E.	67 38 45	2975	66 8 1	2985	64 37 29	2995	63 7 10	3005
25	Sun	W.	115 18 16	3425	116 40 4	3432	118 1 44	3439	119 23 16	3446
	α Pegasi	W.	98 53 33	3412	100 15 36	3423	101 37 26	3432	102 59 6	3443
	α Arietis	W.	56 28 53	3137	57 56 18	3139	59 23 40	3142	60 50 59	3144
	Aldebaran	W.	26 5 23	3208	27 31 23	3197	28 57 36	3188	30 24 0	3181
	Saturn	W.	23 36 17	3086	25 4 44	3087	26 33 9	3089	28 1 32	3091
	Pollux	E.	19 8 58	3054	17 39 52	3066	16 11 1	3078	14 42 25	3093
	Regulus	E.	55 38 19	3046	54 9 3	3052	52 39 55	3059	51 10 55	3066
	Spica ♍	E.	109 40 47	3038	108 11 21	3044	106 42 3	3050	105 12 52	3055
26	Sun	W.	126 9 15	3472	127 39 10	3477	128 51 0	3480	130 11 46	3484
	α Pegasi	W.	109 44 26	3498	111 4 53	3510	112 25 6	3522	113 45 6	3535
	α Arietis	W.	68 6 51	3154	69 33 55	3157	71 0 56	3158	72 27 56	3158
	Aldebaran	W.	37 37 39	3160	39 4 36	3157	40 31 37	3155	41 58 40	3152
	Saturn	W.	35 22 50	3101	36 50 58	3103	38 19 4	3105	39 47 8	3106
	Regulus	E.	43 47 50	3093	42 19 32	3099	40 51 21	3103	39 23 15	3108
	Spica ♍	E.	97 48 26	3076	96 19 47	3080	94 51 13	3083	93 22 42	3085
27	α Pegasi	W.	120 21 22	3609	121 39 47	3626	122 57 53	3644	124 15 40	3664
	α Arietis	W.	79 42 44	3161	81 9 40	3160	82 36 37	3160	84 3 34	3159
	Aldebaran	W.	49 14 34	3143	50 41 52	3141	52 9 12	3138	53 36 36	3136
	Saturn	W.	47 7 10	3109	48 35 9	3109	50 3 8	3109	51 31 7	3108
	Regulus	E.	32 4 8	3130	30 36 35	3134	29 9 7	3140	27 41 46	3147
	Spica ♍	E.	86 0 42	3092	84 32 22	3092	83 4 3	3093	81 35 45	3092
28	α Arietis	W.	91 18 36	3153	92 45 42	3152	94 12 49	3150	95 39 58	3148
	Aldebaran	W.	60 54 16	3123	62 21 58	3119	63 49 44	3117	65 17 33	3113
	Saturn	W.	58 51 22	3101	60 19 31	3099	61 47 42	3096	63 15 56	3094
	Regulus	E.	20 27 12	3194	19 0 56	3211	17 35 0	3234	16 9 31	3263
	Spica ♍	E.	74 14 2	3088	72 45 38	3086	71 17 11	3084	69 48 42	3082

CONFIGURATIONS OF THE SATELLITES OF JUPITE

At 18h 45m, MEAN TIME.

Day of the Month.	*West.*	*East.*
24	·2 1· ○ ·3	4·
25	○ ·2 ·1	3· 4·
26	·1 ○	2· 3· 4·
27	2· 3· ○	1· 4·
28	3· ·2 ·1 4· ○	

The SATELLITES are not visible until the 24th day of this Month,

JUPITER being too near to the SUN.

This Table represents, at 18h 45m after *Mean Noon* of each day of the Month, the relative pos of the images of Jupiter and his Satellites, as they would appear (disregarding their latitud an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the the Satellites by points. The numerals, 1, 2, 3, and 4, annexed to the points, serve to distin the Satellites from each other; and their positions are such as to indicate the directions o Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a S lite is at its greatest elongation, the point is placed above or below the centre of the numeral white circle (○) at the left or right hand of the page, denotes that the Satellite placed ... of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the shadow, of Jupiter.

For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d.660705$. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
				h m s			
−1·1034	+1·1767	−9·1441	−0·7908	3 14 57·44	315	31	·085
1·1116	1·1695	9·1346	0·7926	3 11 1·53	316	32	·088
1·1195	1·1621	9·1250	0·7944	3 7 5·62	317	33	·090
−1·1272	+1·1544	−9·1154	−0·7961	3 3 9·71	318	34	·093
1·1345	1·1464	9·1055	0·7979	2 59 13·80	319	35	·096
1·1416	1·1381	9·0956	0·7996	2 55 17·89	320	36	·099
−1·1485	+1·1295	−9·0855	−0·8014	2 51 21·98	321	37	·101
1·1551	1·1206	9·0753	0·8031	2 47 26·07	322	38	·104
1·1615	1·1114	9·0649	0·8048	2 43 30·16	323	39	·107
−1·1676	+1·1018	−9·0545	−0·8065	2 39 34·25	324	40	·110
1·1736	1·0919	9·0438	0·8082	2 35 38·34	325	41	·112
1·1793	1·0818	9·0331	0·8098	2 31 42·43	326	42	·115
−1·1848	+1·0710	−9·0222	−0·8115	2 27 46·52	327	43	·118
1·1901	1·0600	9·0112	0·8131	2 23 50·61	328	44	·120
1·1952	1·0485	9·0000	0·8147	2 19 54·70	329	45	·123
−1·2001	+1·0366	−8·9886	−0·8162	2 15 58·80	330	46	·126
1·2048	1·0242	8·9770	0·8177	2 12 2·89	331	47	·129
1·2094	1·0113	8·9653	0·8193	2 8 6·98	332	48	·131
−1·2137	+0·9979	−8·9532	−0·8207	2 4 11·07	333	49	·134
1·2179	0·9839	8·9410	0·8222	2 0 15·16	334	50	·137
1·2219	0·9693	8·9287	0·8236	1 56 19·25	335	51	·140
−1·2257	+0·9541	−8·9160	−0·8250	1 52 23·34	336	52	·142
1·2294	0·9383	8·9031	0·8264	1 48 27·43	337	53	·145
1·2329	0·9216	8·8900	0·8277	1 44 31·53	338	54	·148
−1·2362	+0·9042	−8·8766	−0·8290	1 40 35·62	339	55	·151
1·2394	0·8860	8·8629	0·8303	1 36 39·71	340	56	·153
1·2424	0·8668	8·8489	0·8315	1 32 43·80	341	57	·156
1·2453	0·8466	8·8345	0·8327	1 28 47·89	342	58	·159
−1·2480	+0·8252	−8·8197	−0·8338	1 24 51·98	343	59	·162

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time *to be added to Apparent Time.*
		h m s		° ′ ″	″	m s	m s
Thur.	1	22 47 35·37	9·350	S. 7 40 47·1	57·02	1 5·44	12 39·20
Frid.	2	22 51 19·77	9·330	7 17 58·6	57·28	1 5·37	12 27·10
Sat.	3	22 55 3·68	9·310	6 55 4·0	57·52	1 5·30	12 14·49
Sun.	4	22 58 47·11	9·291	6 32 3·5	57·74	1 5·23	12 1·39
Mon.	5	23 2 30·08	9·272	6 8 57·7	57·95	1 5·16	11 47·85
Tues.	6	23 6 12·62	9·256	5 45 46·8	58·15	1 5·10	11 33·89
Wed.	7	23 9 54·75	9·240	5 22 31·2	58·33	1 5·03	11 19·50
Thur.	8	23 13 36·50	9·225	4 59 11·2	58·50	1 4·98	11 4·72
Frid.	9	23 17 17·87	9·210	4 35 47·3	58·65	1 4·92	10 49·58
Sat	10	23 20 58·90	9·196	4 12 19·7	58·78	1 4·87	10 34·10
Sun	11	23 24 39·60	9·183	3 48 48·9	58·90	1 4·82	10 18·30
Mon.	12	23 28 20·00	9·171	3 25 15·2	59·00	1 4·77	10 2·19
Tues.	13	23 32 0·12	9·160	3 1 39·1	59·09	1 4·73	9 45·80
Wed.	14	23 35 39·97	9·150	2 38 0·7	59·17	1 4·69	9 29·14
Thur.	15	23 39 19·56	9·140	2 14 20·7	59·22	1 4·65	9 12·22
Frid.	16	23 42 58·93	9·131	1 50 39·3	59·26	1 4·62	8 55·08
Sat.	17	23 46 38·08	9·123	1 26 57·0	59·29	1 4·58	8 37·73
Sun.	18	23 50 17·03	9·115	1 3 14·1	59·30	1 4·56	8 20·18
Mon.	19	23 53 55·81	9·108	0 39 31·0	59·29	1 4·53	8 2·44
Tues.	20	23 57 34·41	9·103	S. 0 15 48·1	59·26	1 4·51	7 44·55
Wed.	21	0 1 12·88	9·098	N. 0 7 54·2	59·22	1 4·49	7 26·51
Thur.	22	0 4 51·22	9·093	0 31 35·4	59·17	1 4·47	7 8·34
Frid.	23	0 8 29·44	9·089	0 55 15·4	59·09	1 4·46	6 50·07
Sat.	24	0 12 7·57	9·086	1 18 53·5	59·00	1 4·45	6 31·69
Sun.	25	0 15 45·63	9·083	1 42 29·5	58·90	1 4·45	6 13·25
Mon.	26	0 19 23·63	9·083	2 6 3·0	58·78	1 4·44	5 54·76
Tues.	27	0 23 1·61	9·082	2 29 33·6	58·65	1 4·44	5 36·22
Wed	28	0 26 39·57	9·082	2 53 1·1	58·50	1 4·45	5 17·68
Thur.	29	0 30 17·54	9·083	3 16 25·0	58·34	1 4·45	4 59·15
Frid.	30	0 33 55·54	9·085	3 39 45·1	58·16	1 4·46	4 40·64
Sat.	31	0 37 33·59	9·089	4 3 0·9	57·97	1 4·47	4 22·19
Sun.	32	0 41 11·73		N. 4 26 12·2		1 4·48	4 3·83

* *Mean* Time of the Semidiameter passing may be [illegible] ting a [illegible] from the *Side*

AT MEAN NOON.

	Day of the Month.	THE SUN'S		Semidiam.*	Equation of Time *to be subtracted from Mean Time.*	Sidereal Time.
		Apparent Right Ascension.	*Apparent* Declination.			
		h m s	° ′ ″	′ ″	m s	h m s
ır.	1	22 47 33·39	S. 7 40 59·1	16 10·2	12 39·31	22 34 54·08
l.	2	22 51 17·84	7 18 10·5	16 10·0	12 27·21	22 38 50·63
	3	22 55 1·78	6 55 15·7	16 9·7	12 14·60	22 42 47·18
ı.	4	22 58 45·24	6 32 15·1	16 9·5	12 1·50	22 46 43·74
ı.	5	23 2 28·25	6 9 9·1	16 9·2	11 47·96	22 50 40·29
s.	6	23 6 10·84	5 45 58·0	16 9·0	11 34·00	22 54 36·84
l.	7	23 9 53·01	5 22 42·2	16 8·7	11 19·61	22 58 33·40
ır.	8	23 13 34·79	4 59 22·0	16 8·5	11 4·84	23 2 29·95
l.	9	23 17 16·21	4 35 57·8	16 8·2	10 49·70	23 6 26·51
	10	23 20 57·28	4 12 30·1	16 7·9	10 34·22	23 10 23·06
ı.	11	23 24 38·02	3 48 59·1	16 7·6	10 18·41	23 14 19·61
ı.	12	23 28 18·47	3 25 25·1	16 7·4	10 2·30	23 18 16·17
s.	13	23 31 58·63	3 1 48·7	16 7·1	9 45·91	23 22 12·72
l.	14	23 35 38·52	2 38 10·1	16 6·9	9 29·25	23 26 9·27
ır.	15	23 39 18·16	2 14 29·8	16 6·6	9 12·33	23 30 5·83
l.	16	23 42 57·57	1 50 48·1	16 6·3	8 55·19	23 34 2·38
	17	23 46 36·77	1 27 5·5	16 6·0	8 37·84	23 37 58·93
ı.	18	23 50 15·77	1 3 22·3	16 5·8	8 20·28	23 41 55·49
ı.	19	23 53 54·58	0 39 38·9	16 5·5	8 2·54	23 45 52·04
s.	20	23 57 33·24	S. 0 15 55·8	16 5·2	7 44·65	23 49 48·59
l.	21	0 1 11·75	N. 0 7 46·8	16 4·9	7 26·60	23 53 45·15
ır.	22	0 4 50·13	0 31 28·4	16 4·7	7 8·43	23 57 41·70
l.	23	0 8 28·40	0 55 8·6	16 4·4	6 50·15	0 1 38·25
	24	0 12 6·58	1 18 47·0	16 4·1	6 31·77	0 5 34·81
ı.	25	0 15 44·69	1 42 23·3	16 3·8	6 13·33	0 9 31·36
ı.	26	0 19 22·74	2 5 57·2	16 3·6	5 54·83	0 13 27·91
s.	27	0 23 0·76	2 29 28·2	16 3·3	5 36·29	0 17 24·47
d.	28	0 26 38·77	2 52 56·0	16 3·0	5 17·75	0 21 21·02
ır.	29	0 30 16·79	3 16 20·2	16 2·7	4 59·22	0 25 17·57
l.	30	0 33 54·83	3 39 40·5	16 2·5	4 40·70	0 29 14·13
	31	0 37 32·93	4 2 56·7	16 2·2	4 22·25	0 33 10·68
ı.	32	0 41 11·11	N. 4 26 8·3	16 1·9	4 3·88	0 37 7·23

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal P *Noon.*	THE MOON'S Horizontal P *M*
	° ′ ″	″		′ ″	′ ″	′ ″	
1	340 22 38·2	N.0·41	9·9962250	14 45·5	14 46·3	54 3·3	54
2	341 22 45·7	0·40	9·9963340	14 47·5	14 49·0	54 10·5	54
3	342 22 51·4	0·37	9·9964446	14 50·9	14 53·0	54 22·8	54
4	343 22 55·2	0·30	9·9965567	14 55·5	14 58·2	54 39·8	54
5	344 22 57·2	0·22	9·9966704	15 1·2	15 4·5	55 0·7	55
6	345 22 57·5	N.0·11	9·9967857	15 8·0	15 11·8	55 25·7	55
7	346 22 56·1	S.0·01	9·9969024	15 15·9	15 20·1	55 54·4	56
8	347 22 53·0	0·15	9·9970204	15 24·7	15 29·5	56 26·7	56
9	348 22 48·1	0·28	9·9971394	15 34·5	15 39·8	57 2·8	57
10	349 22 41·6	0·41	9·9972594	15 45·3	15 50·8	57 42·0	58
11	350 22 33·4	0·51	9·9973803	15 56·5	16 2·2	58 23·3	58
12	351 22 23·6	0·61	9·9975018	16 7·8	16 13·3	59 4·8	59
13	352 22 12·1	0·68	9·9976238	16 18·4	16 23·2	59 43·7	60
14	353 21 58·9	0·72	9·9977461	16 27·3	16 30·6	60 16·0	60
15	354 21 43·9	0·73	9·9978687	16 33·2	16 34·7	60 37·6	60
16	355 21 27·1	0·71	9·9979914	16 35·2	16 34·5	60 44·9	60
17	356 21 8·3	0·65	9·9981141	16 32·7	16 29·7	60 35·8	60
18	357 20 47·6	0·58	9·9982365	16 25·8	16 20·8	60 10·5	59
19	358 20 24·9	0·48	9·9983588	16 15·1	16 8·7	59 31·4	59
20	359 20 0·1	0·36	9·9984810	16 1·8	15 54·5	58 42·5	58
21	0 19 33·1	0·23	9·9986031	15 47·1	15 39·6	57 48·7	57
22	1 19 4·0	S.0·10	9·9987251	15 32·4	15 25·4	56 54·8	56
23	2 18 32·6	N.0·04	9·9988471	15 18·8	15 12·7	56 5·3	55
24	3 17 58·8	0·16	9·9989690	15 7·3	15 2·4	55 22·9	55
25	4 17 22·7	0·27	9·9990910	14 58·2	14 54·6	54 49·7	54
26	5 16 44·3	0·37	9·9992132	14 51·8	14 49·7	54 26·4	54
27	6 16 3·6	0·43	9·9993356	14 48·2	14 47·4	54 13·2	54
28	7 15 20·6	0·46	9·9994584	14 47·2	14 47·7	54 9·5	54
29	8 14 35·3	0·46	9·9995815	14 48·6	14 50·0	54 14·4	54
30	9 13 47·7	0·43	9·9997052	14 51·8	14 54·2	54 26·6	54
31	10 12 57·8	0·38	9·9998295	14 56·9	14 59·8	54 44·8	54
32	11 12 5·8	N.0·29	9·9999542	15 3·1	15 6·7	55 7·7	55

MEAN TIME.

	Day of the Month.	THE MOON'S							
		Longitude.		Latitude.		Age.	Meridian Passage.		
		Noon.	*Midnight.*	*Noon.*	*Midnight.*	*Noon.*			
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m		
ur.	1	133 46 54·7	139 43 57·9	N.5 1 53·4	N.5 1 2·1	12·7	10 56·5		
d.	2	145 42 5·6	151 41 29·1	4 56 52·8	4 49 25·6	13·7	11 40·6		
.	3	157 42 17·8	163 44 39·7	4 38 43·2	4 24 49·6	14·7	12 22·9		
n.	4	169 48 42·3	175 54 32·8	4 7 51·0	3 47 55·5	15·7	13 4·1		
n.	5	182 2 18·1	188 12 6·6	3 25 13·8	2 59 58·5	16·7	13 45·1		
es.	6	194 24 7·4	200 38 31·7	2 32 23·5	2 2 45·7	17·7	14 27·0		
d.	7	206 55 32·0	213 15 22·6	1 31 23·2	N.0 58 36·6	18·7	15 10·7		
ur.	8	219 38 20·6	226 4 43·9	N.0 24 47·1	S.0 9 41·7	19·7	15 57·5		
d.	9	232 34 51·9	239 9 4·2	S.0 44 25·0	1 18 56·1	20·7	16 48·2		
.	10	245 47 41·5	252 31 1·8	1 52 47·0	2 25 29·1	21·7	17 43·6		
n.	11	259 19 20·9	266 12 51·7	2 56 32·0	3 25 25·2	22·7	18 43·1		
n.	12	273 11 41·4	280 15 50·7	3 51 37·4	4 14 38·1	23·7	19 45·3		
es.	13	287 25 12·9	294 39 31·6	4 33 57·4	4 49 8·5	24·7	20 47·8		
d.	14	301 58 20·9	309 21 4·4	4 59 47·3	5 5 34·2	25·7	21 48·3		
ur.	15	316 46 55·4	324 14 58·3	5 6 16·0	5 1 46·3	26·7	22 45·4		
id.	16	331 44 10·1	339 13 22·3	4 52 6·3	4 37 25·9	27·7	23 39·1		
t.	17	346 41 24·8	354 7 8·1	4 18 2·3	3 54 21·3	28·7	♂		
n.	18	1 29 26·7	8 47 22·0	3 26 54·0	2 56 16·6	0·3	0 30·0		
n.	19	16 0 4·0	23 6 53·4	2 23 8·1	1 48 9·2	1·3	1 19·4		
es.	20	30 7 21·9	37 1 12·5	S.1 11 59·5	S.0 35 17·5	2·3	2 8·2		
d.	21	43 48 18·5	50 28 43·4	N.0 1 21·6	N.0 37 25·6	3·3	2 57·5		
ur.	22	57 2 39·0	63 30 24·6	1 12 26·5	1 45 59·6	4·3	3 47·9		
id.	23	69 52 25·0	76 9 9·7	2 17 43·9	2 47 22·5	5·3	4 39·5		
t.	24	82 21 11·5	88 29 5·6	3 14 39·6	3 39 23·9	6·3	5 32·0		
n.	25	94 33 28·2	100 34 56·4	4 1 25·0	4 20 34·5	7·3	6 24·4		
n.	26	106 34 6·7	112 31 35·3	4 36 45·0	4 49 50·8	8·3	7 15·8		
es.	27	118 27 56·9	124 23 44·7	4 59 46·9	5 6 29·2	9·3	8 5·3		
ed.	28	130 19 29·9	136 15 41·8	5 9 54·6	5 10 0·7	10·3	8 52·4		
ur.	29	142 12 46·6	148 11 8·5	5 6 46·0	5 0 10·5	11·3	9 37·2		
id.	30	154 11 8·9	160 13 5·8	4 50 15·7	4 37 3·7	12·3	10 20·1		
t.	31	166 17 15·5	172 23 50·4	4 20 39·4	4 1 9·7	13·3	11 1·7		
n.	32	178 33 1·3	184 44 56·0	N.3 38 42·3	N.3 13 29·4	14·3	11 43·0		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 1.				*SATURDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	9 11 13·55	N.21 31 0·4	87·48	0	10 44 38·82	N.12 59 34·5	123·30
1	9 13 15·09	21 22 15·5	88·42	1	10 46 31·29	12 47 14·7	123·87
2	9 15 16·41	21 13 25·0	89·35	2	10 48 23·63	12 34 51·5	124·40
3	9 17 17·52	21 4 28·9	90·25	3	10 50 15·83	12 22 25·1	124·93
4	9 19 18·41	20 55 27·4	91·17	4	10 52 7·90	12 9 55·5	125·47
5	9 21 19·08	20 46 20·4	92·07	5	10 53 59·83	11 57 22·7	125·98
6	9 23 19·53	20 37 8·0	92·95	6	10 55 51·64	11 44 46·8	126·48
7	9 25 19·76	20 27 50·3	93·83	7	10 57 43·33	11 32 7·9	127·00
8	9 27 19·78	20 18 27·3	94·73	8	10 59 34·90	11 19 25·9	127·48
9	9 29 19·59	20 8 58·9	95·58	9	11 1 26·35	11 6 41·0	127·97
10	9 31 19·18	19 59 25·4	96·45	10	11 3 17·68	10 53 53·2	128·47
11	9 33 18·55	19 49 46·7	97·30	11	11 5 8·90	10 41 2·4	128·92
12	9 35 17·71	19 40 2·9	98·15	12	11 7 0·01	10 28 8·9	129·38
13	9 37 16·66	19 30 14·0	98·98	13	11 8 51·02	10 15 12·6	129·85
14	9 39 15·41	19 20 20·1	99·82	14	11 10 41·92	10 2 13·5	130·28
15	9 41 13·94	19 10 21·2	100·63	15	11 12 32·73	9 49 11·8	130·73
16	9 43 12·26	19 0 17·4	101·45	16	11 14 23·44	9 36 7·4	131·15
17	9 45 10·38	18 50 8·7	102·27	17	11 16 14·05	9 23 0·5	131·57
18	9 47 8·30	18 39 55·1	103·07	18	11 18 4·58	9 9 51·1	132·00
19	9 49 6·01	18 29 36·7	103·85	19	11 19 55·02	8 56 39·1	132·38
20	9 51 3·51	18 19 13·6	104·63	20	11 21 45·37	8 43 24·8	132·80
21	9 53 0·82	18 8 45·8	105·42	21	11 23 35·65	8 30 8·0	133·17
22	9 54 57·92	17 58 13·3	106·17	22	11 25 25·85	8 16 49·0	133·55
23	9 56 54·83	N.17 47 36·3	106·93	23	11 27 15·98	N. 8 3 27·7	133·93
	FRIDAY 2.				*SUNDAY* 4.		
0	9 58 51·54	N.17 36 54·7	107·68	0	11 29 6·03	N. 7 50 4·1	134·28
1	10 0 48·06	17 26 8·6	108·43	1	11 30 56·02	7 36 38·4	134·63
2	10 2 44·38	17 15 18·0	109·17	2	11 32 45·95	7 23 10·6	134·98
3	10 4 40·52	17 4 23·0	109·90	3	11 34 35·82	7 9 40·7	135·33
4	10 6 36·46	16 53 23·6	110·62	4	11 36 25·63	6 56 8·7	135·65
5	10 8 32·22	16 42 19·9	111·32	5	11 38 15·39	6 42 34·8	135·98
6	10 10 27·79	16 31 12·0	112·03	6	11 40 5·10	6 28 58·9	136·30
7	10 12 23·18	16 19 59·8	112·72	7	11 41 54·76	6 15 21·1	136·60
8	10 14 18·38	16 8 43·5	113·42	8	11 43 44·38	6 1 41·5	136·90
9	10 16 13·41	15 57 23·0	114·08	9	11 45 33·96	5 48 0·1	137·20
10	10 18 8·26	15 45 58·5	114·77	10	11 47 23·51	5 34 16·9	137·48
11	10 20 2·93	15 34 29·9	115·42	11	11 49 13·03	5 20 32·0	137·75
12	10 21 57·43	15 22 57·4	116·07	12	11 51 2·51	5 6 45·5	138·03
13	10 23 51·76	15 11 21·0	116·73	13	11 52 51·97	4 52 57·3	138·28
14	10 25 45·92	14 59 40·6	117·35	14	11 54 41·42	4 39 7·6	138·53
15	10 27 39·92	14 47 56·5	118·00	15	11 56 30·84	4 25 16·4	138·78
16	10 29 33·75	14 36 8·5	118·62	16	11 58 20·26	4 11 23·7	139·02
17	10 31 27·43	14 24 16·8	119·22	17	12 0 9·66	3 57 29·6	139·23
18	10 33 20·94	14 12 21·5	119·83	18	12 1 59·06	3 43 34·2	139·47
19	10 35 14·30	14 0 22·5	120·43	19	12 3 48·46	3 29 37·4	139·67
20	10 37 7·50	13 48 19·9	121·03	20	12 5 37·85	3 15 39·4	139·87
21	10 39 0·55	13 36 13·7	121·60	21	12 7 27·26	3 1 40·2	140·05
22	10 40 53·45	13 24 4·1	122·18	22	12 9 16·68	2 47 39·9	140·25
23	10 42 46·21	13 11 51·0	122·75	23	12 11 6·10	2 33 38·4	140·42
24	10 44 38·82	N.12 59 34·5		24	12 12 55·55	N. 2 19 35·9	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 5.		
	h m s	° ′ ″	″
0	12 12 55·55	N. 2 19 35·9	140·58
1	12 14 45·02	2 5 32·4	140·73
2	12 16 34·51	1 51 28·0	140·88
3	12 18 24·03	1 37 22·7	141·03
4	12 20 13·59	1 23 16·5	141·17
5	12 22 3·18	1 9 9·5	141·28
6	12 23 52·81	0 55 1·8	141·40
7	12 25 42·49	0 40 53·4	141·52
8	12 27 32·22	0 26 44·3	141·62
9	12 29 22·00	N. 0 12 34·6	141·70
10	12 31 11·84	S. 0 1 35·6	141·78
11	12 33 1·74	0 15 46·3	141·85
12	12 34 51·70	0 29 57·4	141·92
13	12 36 41·73	0 44 8·9	141·98
14	12 38 31·84	0 58 20·8	142·02
15	12 40 22·02	1 12 32·9	142·07
16	12 42 12·28	1 26 45·3	142·10
17	12 44 2·63	1 40 57·9	142·12
18	12 45 53·07	1 55 10·6	142·12
19	12 47 43·61	2 9 23·3	142·13
20	12 49 34·24	2 23 36·1	142·12
21	12 51 24·97	2 37 48·8	142·10
22	12 53 15·81	2 52 1·4	142·08
23	12 55 6·76	S. 3 6 13·9	142·05
	TUESDAY 6.		
0	12 56 57·83	S. 3 20 26·2	142·00
1	12 58 49·02	3 34 38·2	141·95
2	13 0 40·33	3 48 49·9	141·90
3	13 2 31·77	4 3 1·3	141·82
4	13 4 23·34	4 17 12·2	141·73
5	13 6 15·04	4 31 22·6	141·65
6	13 8 6·89	4 45 32·5	141·57
7	13 9 58·88	4 59 41·9	141·43
8	13 11 51·02	5 13 50·5	141·33
9	13 13 43·31	5 27 58·5	141·20
10	13 15 35·76	5 42 5·7	141·07
11	13 17 28·37	5 56 12·1	140·92
12	13 19 21·15	6 10 17·6	140·77
13	13 21 14·10	6 24 22·2	140·60
14	13 23 7·22	6 38 25·8	140·42
15	13 25 0·52	6 52 28·3	140·25
16	13 26 54·01	7 6 29·8	140·03
17	13 28 47·68	7 20 30·0	139·85
18	13 30 41·54	7 34 29·1	139·62
19	13 32 35·60	7 48 26·8	139·40
20	13 34 29·86	8 2 23·2	139·17
21	13 36 24·33	8 16 18·2	138·92
22	13 38 19·00	8 30 11·7	138·65
23	13 40 13·89	8 44 3·6	138·40
24	13 42 9·00	S. 8 57 54·0	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 7.		
	h m s	° ′ ″	″
0	13 42 9·00	S. 8 57 54·0	138·12
1	13 44 4·33	9 11 42·7	137·82
2	13 45 59·89	9 25 29·6	137·53
3	13 47 55·68	9 39 14·8	137·22
4	13 49 51·70	9 52 58·1	136·92
5	13 51 47·97	10 6 39·6	136·57
6	13 53 44·48	10 20 19·0	136·23
7	13 55 41·24	10 33 56·4	135·88
8	13 57 38·25	10 47 31·7	135·52
9	13 59 35·52	11 1 4·8	135·15
10	14 1 33·05	11 14 35·7	134·77
11	14 3 30·84	11 28 4·3	134·37
12	14 5 28·90	11 41 30·5	133·97
13	14 7 27·24	11 54 54·3	133·55
14	14 9 25·86	12 8 15·6	133·12
15	14 11 24·76	12 21 34·3	132·68
16	14 13 23·95	12 34 50·4	132·23
17	14 15 23·43	12 48 3·8	131·77
18	14 17 23·20	13 1 14·4	131·28
19	14 19 23·27	13 14 22·1	130·80
20	14 21 23·65	13 27 26·9	130·32
21	14 23 24·34	13 40 28·8	129·80
22	14 25 25·34	13 53 27·6	129·27
23	14 27 26·65	S. 14 6 23·2	128·73
	THURSDAY 8.		
0	14 29 28·28	S. 14 19 15·6	128·18
1	14 31 30·24	14 32 4·7	127·63
2	14 33 32·52	14 44 50·5	127·07
3	14 35 35·13	14 57 32·9	126·47
4	14 37 38·08	15 10 11·7	125·87
5	14 39 41·37	15 22 46·9	125·27
6	14 41 45·01	15 35 18·5	124·65
7	14 43 48·99	15 47 46·4	124·02
8	14 45 53·32	16 0 10·5	123·37
9	14 47 58·00	16 12 30·7	122·70
10	14 50 3·04	16 24 46·9	122·02
11	14 52 8·45	16 36 59·0	121·35
12	14 54 14·22	16 49 7·1	120·65
13	14 56 20·36	17 1 11·0	119·93
14	14 58 26·87	17 13 10·6	119·20
15	15 0 33·76	17 25 5·8	118·47
16	15 2 41·02	17 36 56·6	117·70
17	15 4 48·66	17 48 42·8	116·95
18	15 6 56·69	18 0 24·5	116·15
19	15 9 5·11	18 12 1·4	115·37
20	15 11 13·92	18 23 33·6	114·57
21	15 13 23·12	18 35 1·0	113·73
22	15 15 32·72	18 46 23·4	112·90
23	15 17 42·71	18 57 40·8	112·05
24	15 19 53·11	S. 19 8 53·1	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 9.		
	h m s	° ′ ″	″
0	15 19 53·11	S. 19 8 53·1	111·18
1	15 22 3·91	19 20 0·2	110·30
2	15 24 15·12	19 31 2·0	109·42
3	15 26 26·74	19 41 58·5	108·50
4	15 28 38·77	19 52 49·5	107·58
5	15 30 51·22	20 3 35·0	106·65
6	15 33 4·08	20 14 14·9	105·68
7	15 35 17·36	20 24 49·0	104·72
8	15 37 31·05	20 35 17·3	103·75
9	15 39 45·17	20 45 39·8	102·75
10	15 41 59·72	20 55 56·3	101·73
11	15 44 14·69	21 6 6·7	100·72
12	15 46 30·08	21 16 11·0	99·67
13	15 48 45·91	21 26 9·0	98·62
14	15 51 2·16	21 36 0·7	97·55
15	15 53 18·85	21 45 46·0	96·47
16	15 55 35·97	21 55 24·8	95·37
17	15 57 53·52	22 4 57·0	94·25
18	16 0 11·51	22 14 22·5	93·12
19	16 2 29·93	22 23 41·2	91·97
20	16 4 48·78	22 32 53·0	90·82
21	16 7 8·07	22 41 57·9	89·63
22	16 9 27·79	22 50 55·7	88·45
23	16 11 47·95	S. 22 59 46·4	87·23
	SATURDAY 10.		
0	16 14 8·53	S. 23 8 29·8	86·02
1	16 16 29·55	23 17 5·9	84·80
2	16 18 51·01	23 25 34·7	83·53
3	16 21 12·90	23 33 55·9	82·27
4	16 23 35·22	23 42 9·5	80·98
5	16 25 57·98	23 50 15·4	79·68
6	16 28 21·17	23 58 13·5	78·38
7	16 30 44·78	24 6 3·8	77·05
8	16 33 8·82	24 13 46·1	73·70
9	16 35 33·28	24 21 20·3	74·33
10	16 37 58·17	24 28 46·3	72·98
11	16 40 23·48	24 36 4·2	71·58
12	16 42 49·20	24 43 13·7	70·18
13	16 45 15·35	24 50 14·8	68·77
14	16 47 41·91	24 57 7·4	67·32
15	16 50 8·87	25 3 51·3	65·88
16	16 52 36·25	25 10 26·6	64·43
17	16 55 4·04	25 16 53·2	62·95
18	16 57 32·22	25 23 10·9	61·45
19	17 0 0·81	25 29 19·6	59·95
20	17 2 29·79	25 35 19·3	58·43
21	17 4 59·16	25 41 9·9	56·90
22	17 7 28·91	25 46 51·3	55·35
23	17 9 59·05	25 52 23·4	53·80
24	17 12 29·57	S. 25 57 46·2	

Hour.	Right Ascension.	Declination.	Diff. for
	SUNDAY 11.		
	h m s	° ′ ″	″
0	17 12 29·57	S. 25 57 46·2	52
1	17 15 0·47	26 2 59·6	50
2	17 17 31·73	26 8 3·4	49
3	17 20 3·36	26 12 57·6	47
4	17 22 35·35	26 17 42·2	45
5	17 25 7·69	26 22 17·0	44
6	17 27 40·38	26 26 42·0	42
7	17 30 13·41	26 30 57·0	40
8	17 32 46·78	26 35 2·1	39
9	17 35 20·48	26 38 57·1	37
10	17 37 54·50	26 42 42·0	35
11	17 40 28·84	26 46 16·7	34
12	17 43 3·49	26 49 41·2	32
13	17 45 38·45	26 52 55·3	30
14	17 48 13·70	26 55 59·0	28
15	17 50 49·24	26 58 52·3	27
16	17 53 25·07	27 1 35·0	25
17	17 56 1·17	27 4 7·1	23
18	17 58 37·53	27 6 28·6	21
19	18 1 14·15	27 8 39·3	20
20	18 3 51·03	27 10 39·3	18
21	18 6 28·15	27 12 28·5	16
22	18 9 5·51	27 14 6·9	14
23	18 11 43·09	S. 27 15 34·3	12
	MONDAY 12.		
0	18 14 20·88	S. 27 16 50·7	10
1	18 16 58·89	27 17 56·1	9
2	18 19 37·10	27 18 50·5	7
3	18 22 15·50	27 19 33·7	5
4	18 24 54·09	27 20 5·8	3
5	18 27 32·85	27 20 26·7	1
6	18 30 11·78	27 20 36·4	0
7	18 32 50·86	27 20 34·9	2
8	18 35 30·09	27 20 22·0	4
9	18 38 9·46	27 19 57·9	5
10	18 40 48·95	27 19 22·4	7
11	18 43 28·56	27 18 35·5	9
12	18 46 8·29	27 17 37·2	11
13	18 48 48·12	27 16 27·5	13
14	18 51 28·03	27 15 6·4	15
15	18 54 8·02	27 13 33·8	17
16	18 56 48·09	27 11 49·7	19
17	18 59 28·22	27 9 54·2	21
18	19 2 8·39	27 7 47·2	23
19	19 4 48·61	27 5 28·7	25
20	19 7 28·86	27 2 58·6	26
21	19 10 9·14	27 0 17·1	28
22	19 12 49·43	26 57 24·2	30
23	19 15 29·71	26 54 19·7	32
24	19 18 9·99	S. 26 51 3·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 13.		
	h m s	° ′ ″	″
0	19 18 9·99	S. 26 51 3·7	34·58
1	19 20 50·26	26 47 36·2	36·48
2	19 23 30·50	26 43 57·3	38·40
3	19 26 10·70	26 40 6·9	40·30
4	19 28 50·86	26 36 5·1	42·22
5	19 31 30·96	26 31 51·8	44·10
6	19 34 11·00	26 27 27·2	46·00
7	19 36 50·97	26 22 51·2	47·90
8	19 39 30·86	26 18 3·8	49·78
9	19 42 10·66	26 13 5·1	51·67
10	19 44 50·36	26 7 55·1	53·55
11	19 47 29·95	26 2 33·8	55·42
12	19 50 9·42	25 57 1·3	57·28
13	19 52 48·77	25 51 17·6	59·13
14	19 55 27·98	25 45 22·8	61·00
15	19 58 7·06	25 39 16·8	62·83
16	20 0 45·98	25 32 59·8	64·68
17	20 3 24·74	25 26 31·7	66·50
18	20 6 3·34	25 19 52·7	68·32
19	20 8 41·77	25 13 2·8	70·13
20	20 11 20·01	25 6 2·0	71·93
21	20 13 58·07	24 58 50·4	73·73
22	20 16 35·93	24 51 28·0	75·50
23	20 19 13·59	S. 24 43 55·0	77·28
	WEDNESDAY 14.		
0	20 21 51·03	S. 24 36 11·3	79·05
1	20 24 28·26	24 28 17·0	80·80
2	20 27 5·26	24 20 12·2	82·53
3	20 29 42·04	24 11 57·0	84·25
4	20 32 18·58	24 3 31·5	85·98
5	20 34 54·87	23 54 55·6	87·68
6	20 37 30·92	23 46 9·5	89·37
7	20 40 6·71	23 37 13·3	91·03
8	20 42 42·25	23 28 7·1	92·72
9	20 45 17·52	23 18 50·8	94·35
10	20 47 52·52	23 9 24·7	96·00
11	20 50 27·25	22 59 48·7	97·62
12	20 53 1·69	22 50 3·0	99·22
13	20 55 35·85	22 40 7·7	100·82
14	20 58 9·73	22 30 2·8	102·40
15	21 0 43·31	22 19 48·4	103·95
16	21 3 16·60	22 9 24·7	105·50
17	21 5 49·59	21 58 51·7	107·03
18	21 8 22·28	21 48 9·5	108·53
19	21 10 54·66	21 37 18·3	110·05
20	21 13 26·73	21 26 18·0	111·52
21	21 15 58·48	21 15 8·9	113·00
22	21 18 29·92	21 3 50·9	114·45
23	21 21 1·05	20 52 24·2	115·87
24	21 23 31·85	S. 20 40 49·0	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 15.		
	h m s	° ′ ″	″
0	21 23 31·85	S. 20 40 49·0	117·28
1	21 26 2·33	20 29 5·3	118·70
2	21 28 32·48	20 17 13·1	120·07
3	21 31 2·30	20 5 12·7	121·42
4	21 33 31·80	19 53 4·2	122·78
5	21 36 0·97	19 40 47·5	124·10
6	21 38 29·80	19 28 22·9	125·40
7	21 40 58·31	19 15 50·5	126·70
8	21 43 26·48	19 3 10·3	127·97
9	21 45 54·32	18 50 22·5	129·22
10	21 48 21·83	18 37 27·2	130·45
11	21 50 49·00	18 24 24·5	131·67
12	21 53 15·83	18 11 14·5	132·87
13	21 55 42·33	17 57 57·3	134·03
14	21 58 8·49	17 44 33·1	135·18
15	22 0 34·32	17 31 2·0	136·33
16	22 2 59·81	17 17 24·0	137·43
17	22 5 24·97	17 3 39·4	138·55
18	22 7 49·80	16 49 48·1	139·62
19	22 10 14·30	16 35 50·4	140·68
20	22 12 38·46	16 21 46·3	141·72
21	22 15 2·29	16 7 36·0	142·73
22	22 17 25·79	15 53 19·6	143·73
23	22 19 48·96	S. 15 38 57·2	144·72
	FRIDAY 16.		
0	22 22 11·81	S. 15 24 28·9	145·67
1	22 24 34·33	15 9 54·9	146·62
2	22 26 56·53	14 55 15·2	147·53
3	22 29 18·40	14 40 30·0	148·42
4	22 31 39·96	14 25 39·5	149·32
5	22 34 1·20	14 10 43·7	150·15
6	22 36 22·12	13 55 42·7	151·00
7	22 38 42·73	13 40 36·7	151·82
8	22 41 3·03	13 25 25·8	152·62
9	22 43 23·02	13 10 10·1	153·40
10	22 45 42·71	12 54 49·7	154·15
11	22 48 2·09	12 39 24·8	154·88
12	22 50 21·17	12 23 55·5	155·60
13	22 52 39·96	12 8 21·9	156·30
14	22 54 58·45	11 52 44·1	156·97
15	22 57 16·65	11 37 2·3	157·63
16	22 59 34·56	11 21 16·5	158·27
17	23 1 52·19	11 5 26·9	158·87
18	23 4 9·53	10 49 33·6	159·48
19	23 6 26·60	10 33 36·8	160·03
20	23 8 43·40	10 17 36·6	160·60
21	23 10 59·92	10 1 33·0	161·13
22	23 13 16·17	9 45 26·2	161·65
23	23 15 32·16	9 29 16·3	162·15
24	23 17 47·89	S. 9 13 3·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 17.		
	h m s	° ′ ″	″
0	23 17 47·89	S. 9 13 3·4	162·62
1	23 20 3·37	8 56 47·7	163·07
2	23 22 18·59	8 40 29·3	163·50
3	23 24 33·56	8 24 8·3	163·92
4	23 26 48·29	8 7 44·8	164·32
5	23 29 2·78	7 51 18·9	164·68
6	23 31 17·03	7 34 50·8	165·05
7	23 33 31·05	7 18 20·5	165·38
8	23 35 44·84	7 1 48·2	165·70
9	23 37 58·41	6 45 14·0	165·98
10	23 40 11·75	6 28 38·1	166·27
11	23 42 24·88	6 12 0·5	166·53
12	23 44 37·79	5 55 21·3	166·77
13	23 46 50·50	5 38 40·7	166·98
14	23 49 3·00	5 21 58·8	167·20
15	23 51 15·30	5 5 15·6	167·37
16	23 53 27·41	4 48 31·4	167·53
17	23 55 39·33	4 31 46·2	167·68
18	23 57 51·06	4 15 0·1	167·80
19	0 0 2·61	3 58 13·3	167·92
20	0 2 13·98	3 41 25·8	168·00
21	0 4 25·18	3 24 37·8	168·08
22	0 6 36·21	3 7 49·3	168·12
23	0 8 47·07	S. 2 51 0·6	168 17
	SUNDAY 18.		
0	0 10 57·77	S. 2 34 11·6	168·18
1	0 13 8·32	2 17 22·5	168·17
2	0 15 18·72	2 0 33·5	168·15
3	0 17 28·97	1 43 44·6	168·12
4	0 19 39·08	1 26 55·9	168·07
5	0 21 49·05	1 10 7·5	168·00
6	0 23 58·89	0 53 19·5	167·90
7	0 26 8·60	0 36 32·1	167·78
8	0 28 18·18	0 19 45·4	167·67
9	0 30 27·64	S. 0 2 59·4	167·53
10	0 32 36·99	N. 0 13 45·8	167·37
11	0 34 46·22	0 30 30·0	167·20
12	0 36 55·35	0 47 13·2	167·00
13	0 39 4·38	1 3 55·2	166·80
14	0 41 13·31	1 20 36·0	166·57
15	0 43 22·14	1 37 15·4	166·32
16	0 45 30·89	1 53 53·3	166·07
17	0 47 39·55	2 10 29·7	165·78
18	0 49 48·13	2 27 4·4	165·50
19	0 51 56·63	2 43 37·4	165·20
20	0 54 5·07	3 0 8·6	164·87
21	0 56 13·43	3 16 37·8	164·53
22	0 58 21·73	3 33 5·0	164·18
23	1 0 29·97	3 49 30·1	163·80
24	1 2 38·16	N. 4 5 52·9	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 19.		
	h m s	° ′ ″	″
0	1 2 38·16	N. 4 5 52·9	163·42
1	1 4 46·30	4 22 13·4	163·02
2	1 6 54·39	4 38 31·5	162·62
3	1 9 2·44	4 54 47·2	162·17
4	1 11 10·45	5 11 0·2	161·72
5	1 13 18·43	5 27 10·5	161·27
6	1 15 26·37	5 43 18·1	160·80
7	1 17 34·29	5 59 22·9	160·30
8	1 19 42·19	6 15 24·7	159·78
9	1 21 50·07	6 31 23·4	159·28
10	1 23 57·94	6 47 19·1	158·73
11	1 26 5·80	7 3 11·5	158·20
12	1 28 13·64	7 19 0·7	157·63
13	1 30 21·48	7 34 46·5	157·07
14	1 32 29·33	7 50 28·9	156·47
15	1 34 37·19	8 6 7·7	155·87
16	1 36 45·05	8 21 42·9	155·25
17	1 38 52·92	8 37 14·4	154·62
18	1 41 0·81	8 52 42·1	153·97
19	1 43 8·72	9 8 5·9	153·33
20	1 45 16·65	9 23 25·9	152·65
21	1 47 24·60	9 38 41·8	151·97
22	1 49 32·59	9 53 53·6	151·27
23	1 51 40·61	N.10 9 1·2	150·57
	TUESDAY 20.		
0	1 53 48·66	N.10 24 4·6	149·85
1	1 55 56·76	10 39 3·7	149·10
2	1 58 4·90	10 53 58·3	148·37
3	2 0 13·08	11 8 48·5	147·62
4	2 2 21·31	11 23 34·2	146·83
5	2 4 29·60	11 38 15·2	146·05
6	2 6 37·94	11 52 51·5	145·27
7	2 8 46·34	12 7 23·1	144·45
8	2 10 54·80	12 21 49·8	143·63
9	2 13 3·33	12 36 11·6	142·82
10	2 15 11·92	12 50 28·5	141·97
11	2 17 20·58	13 4 40·3	141·12
12	2 19 29·32	13 18 47·0	140·25
13	2 21 38·13	13 32 48·5	139·38
14	2 23 47·01	13 46 44·8	138·48
15	2 25 55·97	14 0 35·7	137·60
16	2 28 5·02	14 14 21·3	136·70
17	2 30 14·15	14 28 1·5	135·77
18	2 32 23·37	14 41 36·1	134·83
19	2 34 32·68	14 55 5·1	133·92
20	2 36 42·08	15 8 28·6	132·95
21	2 38 51·57	15 21 46·3	132·00
22	2 41 1·16	15 34 58·3	131·02
23	2 43 10·84	15 48 4·4	130·05
24	2 45 20·63	N.16 1 4·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 21.		
	h m s	° ′ ″	″
0	2 45 20·63	N.16 1 4·7	129·05
1	2 47 30·51	16 13 59·0	128·07
2	2 49 40·50	16 26 47·4	127·05
3	2 51 50·60	16 39 29·7	126·02
4	2 54 0·80	16 52 5·8	125·00
5	2 56 11·10	17 4 35·8	123·97
6	2 58 21·52	17 16 59·6	122·92
7	3 0 32·04	17 29 17·1	121·85
8	3 2 42·68	17 41 28·2	120·80
9	3 4 53·43	17 53 33·0	119·72
10	3 7 4·30	18 5 31·3	118·63
11	3 9 15·28	18 17 23·1	117·55
12	3 11 26·37	18 29 8·4	116·45
13	3 13 37·58	18 40 47·1	115·33
14	3 15 48·91	18 52 19·1	114·22
15	3 18 0·36	19 3 44·4	113·10
16	3 20 11·93	19 15 3·0	111·95
17	3 22 23·62	19 26 14·7	110·83
18	3 24 35·42	19 37 19·7	109·67
19	3 26 47·35	19 48 17·7	108·52
20	3 28 59·40	19 59 8·8	107·35
21	3 31 11·57	20 9 52·9	106·17
22	3 33 23·86	20 20 29·9	105·00
23	3 35 36·27	N.20 30 59·9	103·82
	THURSDAY 22.		
0	3 37 48·81	N.20 41 22·8	102·62
1	3 40 1·47	20 51 38·5	101·42
2	3 42 14·24	21 1 47·0	100·22
3	3 44 27·14	21 11 48·3	99·00
4	3 46 40·16	21 21 42·3	97·77
5	3 48 53·30	21 31 28·9	96·53
6	3 51 6·56	21 41 8·1	95·32
7	3 53 19·93	21 50 40·0	94·07
8	3 55 33·43	22 0 4·4	92·82
9	3 57 47·04	22 9 21·3	91·57
10	4 0 0·76	22 18 30·7	90·30
11	4 2 14·60	22 27 32·5	89·03
12	4 4 28·56	22 36 26·7	87·77
13	4 6 42·63	22 45 13·3	86·48
14	4 8 56·81	22 53 52·2	85·20
15	4 11 11·11	23 2 23·4	83·90
16	4 13 25·51	23 10 46·8	82·62
17	4 15 40·02	23 19 2·5	81·32
18	4 17 54·64	23 27 10·4	80·02
19	4 20 9·36	23 35 10·5	78·72
20	4 22 24·19	23 43 2·8	77·38
21	4 24 39·11	23 50 47·1	76·07
22	4 26 54·13	23 58 23·5	74·75
23	4 29 9·25	24 5 52·0	73·43
24	4 31 24·47	N.24 13 12·6	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 23.		
	h m s	° ′ ″	″
0	4 31 24·47	N.24 13 12·6	72·10
1	4 33 39·78	24 20 25·2	70·77
2	4 35 55·18	24 27 29·8	69·42
3	4 38 10·67	24 34 26·3	68·07
4	4 40 26·24	24 41 14·7	66·73
5	4 42 41·90	24 47 55·1	65·38
6	4 44 57·63	24 54 27·4	64·02
7	4 47 13·45	25 0 51·5	62·67
8	4 49 29·34	25 7 7·5	61·30
9	4 51 45·31	25 13 15·3	59·95
10	4 54 1·34	25 19 15·0	58·57
11	4 56 17·44	25 25 6·4	57·20
12	4 58 33·61	25 30 49·6	55·82
13	5 0 49·84	25 36 24·5	54·45
14	5 3 6·13	25 41 51·2	53·07
15	5 5 22·47	25 47 9·6	51·68
16	5 7 38·86	25 52 19·7	50·30
17	5 9 55·30	25 57 21·5	48·92
18	5 12 11·79	26 2 15·0	47·53
19	5 14 28·32	26 7 0·2	46·13
20	5 16 44·89	26 11 37·0	44·75
21	5 19 1·50	26 16 5·5	43·37
22	5 21 18·13	26 20 25·7	41·97
23	5 23 34·80	N.26 24 37·5	40·57
	SATURDAY 24.		
0	5 25 51·49	N.26 28 40·9	39·18
1	5 28 8·20	26 32 36·0	37·78
2	5 30 24·93	26 36 22·7	36·38
3	5 32 41·67	26 40 1·0	34·98
4	5 34 58·42	26 43 30·9	33·60
5	5 37 15·18	26 46 52·5	32·18
6	5 39 31·94	26 50 5·6	30·80
7	5 41 48·70	26 53 10·4	29·38
8	5 44 5·45	26 56 6·7	28·00
9	5 46 22·20	26 58 54·7	26·60
10	5 48 38·92	27 1 34·3	25·20
11	5 50 55·63	27 4 5·5	23·80
12	5 53 12·32	27 6 28·3	22·40
13	5 55 28·98	27 8 42·7	21·00
14	5 57 45·62	27 10 48·7	19·62
15	6 0 2·22	27 12 46·4	18·22
16	6 2 18·78	27 14 35·7	16·82
17	6 4 35·30	27 16 16·6	15·43
18	6 6 51·77	27 17 49·2	14·03
19	6 9 8·20	27 19 13·4	12·65
20	6 11 24·57	27 20 29·3	11·27
21	6 13 40·89	27 21 36·9	9·87
22	6 15 57·14	27 22 36·1	8·50
23	6 18 13·32	27 23 27·1	7·10
24	6 20 29·44	N.27 24 9·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 25.				*TUESDAY* 27.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	6 20 29·44	N.27 24 9·7	5·73	0	8 6 48·87	N.25 22 30·7	55·85
1	6 22 45·48	27 24 44·1	4·35	1	8 8 57·33	25 16 55·6	57·02
2	6 25 1·45	27 25 10·2	2·97	2	8 11 5·56	25 11 13·5	58·13
3	6 27 17·33	27 25 28·0	1·60	3	8 13 13·58	25 5 24·7	59·28
4	6 29 33·12	27 25 37·6	0·23	4	8 15 21·37	24 59 29·0	60·42
5	6 31 48·83	27 25 39·0	1·13	5	8 17 28·94	24 53 26·5	61·53
6	6 34 4·44	27 25 32·2	2·50	6	8 19 36·28	24 47 17·3	62·65
7	6 36 19·95	27 25 17·2	3·87	7	8 21 43·40	24 41 1·4	63·75
8	6 38 35·36	27 24 54·0	5·23	8	8 23 50·29	24 34 38·9	64·87
9	6 40 50·67	27 24 22·6	6·57	9	8 25 56·96	24 28 9·7	65·95
10	6 43 5·87	27 23 43·2	7·93	10	8 28 3·40	24 21 34·0	67·05
11	6 45 20·95	27 22 55·6	9·28	11	8 30 9·61	24 14 51·7	68·12
12	6 47 35·91	27 21 59·9	10·63	12	8 32 15·60	24 8 3·0	69·20
13	6 49 50·75	27 20 56·1	11·97	13	8 34 21·36	24 1 7·8	70·25
14	6 52 5·47	27 19 44·3	13·30	14	8 36 26·88	23 54 6·3	71·33
15	6 54 20·06	27 18 24·5	14·65	15	8 38 32·18	23 46 58·3	72·37
16	6 56 34·52	27 16 56·6	15·97	16	8 40 37·24	23 39 44·1	73·42
17	6 58 48·85	27 15 20·8	17·30	17	8 42 42·08	23 32 23·6	74·47
18	7 1 3·04	27 13 37·0	18·62	18	8 44 46·68	23 24 56·8	75·48
19	7 3 17·08	27 11 45·3	19·93	19	8 46 51·05	23 17 23·9	76·52
20	7 5 30·97	27 9 45·7	21·25	20	8 48 55·19	23 9 44·8	77·53
21	7 7 44·72	27 7 38·2	22·55	21	8 50 59·10	23 1 59·6	78·53
22	7 9 58·32	27 5 22·9	23·87	22	8 53 2·78	22 54 8·4	79·55
23	7 12 11·76	N.27 2 59·7	25·15	23	8 55 6·23	N.22 46 11·1	80·53
	MONDAY 26.				*WEDNESDAY* 28.		
0	7 14 25·04	N.27 0 28·8	26·45	0	8 57 9·44	N.22 38 7·9	81·53
1	7 16 38·16	26 57 50·1	27·75	1	8 59 12·43	22 29 58·7	82·50
2	7 18 51·11	26 55 3·6	29·02	2	9 1 15·19	22 21 43·7	83·48
3	7 21 3·90	26 52 9·5	30·30	3	9 3 17·71	22 13 22·8	84·45
4	7 23 16·51	26 49 7·7	31·58	4	9 5 20·01	22 4 56·1	85·40
5	7 25 28·95	26 45 58·2	32·85	5	9 7 22·08	21 56 23·7	86·35
6	7 27 41·22	26 42 41·1	34·12	6	9 9 23·92	21 47 45·6	87·30
7	7 29 53·30	26 39 16·4	35·37	7	9 11 25·54	21 39 1·8	88·25
8	7 32 5·20	26 35 44·2	36·62	8	9 13 26·93	21 30 12·3	89·17
9	7 34 16·92	26 32 4·5	37·87	9	9 15 28·09	21 21 17·3	90·08
10	7 36 28·44	26 28 17·3	39·10	10	9 17 29·03	21 12 16·8	91·00
11	7 38 39·78	26 24 22·7	40·35	11	9 19 29·75	21 3 10·8	91·92
12	7 40 50·93	26 20 20·6	41·57	12	9 21 30·24	20 53 59·3	92·82
13	7 43 1·88	26 16 11·2	42·80	13	9 23 30·51	20 44 42·4	93·70
14	7 45 12·64	26 11 54·4	44·02	14	9 25 30·56	20 35 20·2	94·58
15	7 47 23·19	26 7 30·3	45·23	15	9 27 30·40	20 25 52·7	95·47
16	7 49 33·55	26 2 58·9	46·43	16	9 29 30·01	20 16 19·9	96·33
17	7 51 43·70	25 58 20·3	47·63	17	9 31 29·41	20 6 41·9	97·18
18	7 53 53·64	25 53 34·5	48·82	18	9 33 28·59	19 56 58·8	98·05
19	7 56 3·38	25 48 41·6	50·02	19	9 35 27·56	19 47 10·5	98·90
20	7 58 12·90	25 43 41·5	51·20	20	9 37 26·32	19 37 17·1	99·73
21	8 0 22·22	25 38 34·3	52·37	21	9 39 24·86	19 27 18·7	100·58
22	8 2 31·32	25 33 20·1	53·53	22	9 41 23·20	19 17 15·2	101·38
23	8 4 40·20	25 27 58·9	54·70	23	9 43 21·33	19 7 6·9	102·22
24	8 6 48·87	N.25 22 30·7		24	9 45 19·25	N.18 56 53·6	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 29.		
	h m s	° ′ ″	″
0	9 45 19·25	N.18 56 53·6	103·02
1	9 47 16·97	18 46 35·5	103·83
2	9 49 14·49	18 36 12·5	104·62
3	9 51 11·80	18 25 44·8	105·40
4	9 53 8·92	18 15 12·4	106·20
5	9 55 5·85	18 4 35·2	106·95
6	9 57 2·58	17 53 53·5	107·73
7	9 58 59 11	17 43 7·1	108·47
8	10 0 55·46	17 32 16·3	109·23
9	10 2 51·62	17 21 20·9	109·98
10	10 4 47·59	17 10 21·0	110·70
11	10 6 43·38	16 59 16·8	111·43
12	10 8 38·99	16 48 8·2	112·15
13	10 10 34·42	16 36 55·3	112·87
14	10 12 29·67	16 25 38·1	113·57
15	10 14 24·75	16 14 16·7	114·27
16	10 16 19·66	16 2 51·1	114·95
17	10 18 14·40	15 51 21·4	115·63
18	10 20 8·97	15 39 47·6	116·32
19	10 22 3·38	15 28 9·7	116·98
20	10 23 57·62	15 16 27·8	117·63
21	10 25 51·70	15 4 42·0	118·30
22	10 27 45·63	14 52 52·2	118·93
23	10 29 39·41	N.14 40 58·6	119·57
	FRIDAY 30.		
0	10 31 33·03	N.14 29 1·2	120·20
1	10 33 26·51	14 17 0·0	120·83
2	10 35 19·84	14 4 55·0	121·43
3	10 37 13·02	13 52 46·4	122·05
4	10 39 6·06	13 40 34·1	122·65
5	10 40 58·97	13 28 18·2	123·23
6	10 42 51·75	13 15 58·8	123·82
7	10 44 44·39	13 3 35·9	124·40
8	10 46 36·90	12 51 9·5	124·97
9	10 48 29·29	12 38 39·7	125·53
10	10 50 21·56	12 26 6·5	126·07
11	10 52 13·71	12 13 30·1	126·63
12	10 54 5·74	12 0 50·3	127·17
13	10 55 57·66	11 48 7·3	127·70
14	10 57 49·47	11 35 21·1	128·20
15	10 59 41·18	11 22 31·9	128·73
16	11 1 32·78	11 9 39·5	129·25
17	11 3 24·28	10 56 44·0	129·73
18	11 5 15·68	10 43 45·6	130·23
19	11 7 6·99	10 30 44·2	130·70
20	11 8 58·21	10 17 40·0	131·20
21	11 10 49·34	10 4 32·8	131·65
22	11 12 40·39	9 51 22·9	132·12
23	11 14 31·36	9 38 10·2	132·57
24	11 16 22·25	N. 9 24 54·8	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 31.		
	h m s	° ′ ″	″
0	11 16 22·25	N. 9 24 54·8	133·02
1	11 18 13·07	9 11 36·7	133·43
2	11 20 3·82	8 58 16·1	133·88
3	11 21 54·50	8 44 52·8	134·30
4	11 23 45·12	8 31 27·0	134·70
5	11 25 35·67	8 17 58·8	135·12
6	11 27 26·17	8 4 28·1	135·52
7	11 29 16·62	7 50 55·0	135·92
8	11 31 7·02	7 37 19·5	136·28
9	11 32 57·37	7 23 41·8	136·65
10	11 34 47·68	7 10 1·9	137·03
11	11 36 37·95	6 56 19·7	137·38
12	11 38 28·19	6 42 35·4	137·73
13	11 40 18·39	6 28 49·0	138·08
14	11 42 8·57	6 15 0·5	138·42
15	11 43 58·72	6 1 10·0	138·75
16	11 45 48·86	5 47 17·5	139·05
17	11 47 38·97	5 33 23·2	139·37
18	11 49 29·07	5 19 27·0	139·67
19	11 51 19·17	5 5 29·0	139·97
20	11 53 9·26	4 51 29·2	140·23
21	11 54 59·34	4 37 27·8	140·52
22	11 56 49·43	4 23 24·7	140·78
23	11 58 39·53	N. 4 9 20·0	141·05
	SUNDAY, APRIL 1.		
0	12 0 29·63	N. 3 55 13·7	

PHASES OF THE MOON.

	d	h	m
○ Full Moon - -	3	10	8·0
☾ *Last Quarter* -	11	1	59·3
● New Moon - -	17	16	45·2
☽ *First Quarter* -	24	23	25·3

	d	h
☾ Perigee - - - - -	15	23
☾ Apogee - - - - -	27	22

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.			P.L. of diff.	III^h.			P.L. of diff.	VI^h.			P.L. of diff.	IX^h.			P.L. of diff.
			°	′	″		°	′	″		°	′	″		°	′	″	
1	α Arietis	W.	97	7	10	3146	98	34	24	3143	100	1	41	3141	101	29	1	3138
	Aldebaran	W.	66	45	27	3109	68	13	25	3106	69	41	27	3102	71	9	34	3098
	Saturn	W.	64	44	13	3091	66	12	33	3088	67	40	57	3085	69	9	25	3082
	Pollux	W.	22	30	16	3085	23	58	44	3081	25	27	17	3076	26	55	56	3071
	Spica ♍	E.	68	20	11	3079	66	51	36	3078	65	22	59	3074	63	54	18	3072
2	Aldebaran	W.	78	31	24	3077	80	0	2	3073	81	28	45	3067	82	57	35	3063
	Saturn	W.	76	32	50	3063	78	1	45	3058	79	30	46	3054	80	59	52	3049
	Pollux	W.	34	20	37	3048	35	49	50	3043	37	19	10	3038	38	48	36	3033
	Spica ♍	E.	56	29	58	3055	55	0	53	3051	53	31	43	3047	52	2	29	3043
	Antares	E.	102	21	12	3043	100	51	53	3040	99	22	30	3035	97	53	0	3031
3	Aldebaran	W.	90	23	13	3037	91	52	40	3031	93	22	14	3026	94	51	54	3021
	Saturn	W.	88	26	53	3024	89	56	36	3019	91	26	25	3013	92	56	22	3008
	Pollux	W.	46	17	23	3006	47	47	29	3000	49	17	42	2994	50	48	2	2989
	Spica ♍	E.	44	35	3	3023	43	5	19	3018	41	35	29	3014	40	5	34	3010
	Antares	E.	90	24	3	3005	88	53	56	3000	87	23	43	2993	85	53	22	2989
4	Saturn	W.	100	27	51	2978	101	58	31	2973	103	29	18	2966	105	0	14	2960
	Pollux	W.	58	21	35	2958	59	52	41	2952	61	23	54	2945	62	55	16	2938
	Regulus	W.	22	16	35	3042	23	45	56	3026	25	15	37	3010	26	45	37	2997
	Spica ♍	E.	32	34	46	2992	31	4	23	2989	29	33	57	2987	28	3	28	2985
	Antares	E.	78	19	52	2958	76	48	47	2952	75	17	34	2946	73	46	13	2940
5	Pollux	W.	70	34	14	2904	72	6	28	2897	73	38	51	2890	75	11	23	2883
	Regulus	W.	34	19	26	2942	35	50	52	2931	37	22	31	2921	38	54	23	2912
	Antares	E.	66	7	27	2906	64	35	16	2899	63	2	56	2892	61	30	27	2885
6	Pollux	W.	82	56	26	2844	84	29	57	2837	86	3	37	2828	87	37	28	2821
	Regulus	W.	46	36	38	2866	48	9	40	2857	49	42	54	2848	51	16	19	2809
	Antares	E.	53	45	44	2849	52	12	19	2841	50	38	44	2833	49	4	59	2825
	α Aquilæ	E.	102	2	7	3708	100	45	28	3692	99	28	32	3676	98	11	19	3661
7	Pollux	W.	95	29	23	2778	97	4	20	2769	98	39	28	2761	100	14	47	2751
	Regulus	W.	59	6	22	2793	60	40	59	2785	62	15	47	2775	63	50	48	2765
	Antares	E.	41	13	42	2785	39	38	55	2778	38	3	58	2769	36	28	50	2761
	α Aquilæ	E.	91	41	38	3601	90	23	5	3593	89	4	23	3585	87	45	32	3577
	Jupiter	E.	111	16	41	2869	109	43	42	2859	108	10	31	2849	106	37	7	2840
	Sun	E.	139	25	59	3163	137	59	6	3152	136	31	59	3140	135	4	38	3129
8	Regulus	W.	71	49	6	2716	73	25	25	2706	75	1	57	2695	76	38	44	2685
	Spica ♍	W.	17	58	56	2805	19	33	18	2780	21	8	12	2757	22	43	36	2738
	Antares	E.	28	30	26	2720	26	54	13	2713	25	17	50	2705	23	41	17	2698
	α Aquilæ	E.	81	9	39	3555	79	50	16	3554	78	30	52	3555	77	11	28	3556
	Jupiter	E.	98	47	0	2791	97	12	20	2780	95	37	26	2770	94	2	19	2759
	Sun	E.	127	44	28	3072	126	15	44	3060	124	46	46	3048	123	17	33	3037
9	Regulus	W.	84	46	9	2630	86	24	23	2620	88	2	51	2608	89	41	35	2596
	Spica ♍	W.	30	46	35	2655	32	24	15	2641	34	2	14	2627	35	40	32	2613
	α Aquilæ	E.	70	35	17	3583	69	16	24	3593	67	57	42	3605	66	39	13	3620
	Jupiter	E.	86	3	10	2704	84	26	36	2693	82	49	47	2682	81	12	43	2671
	Sun	E.	115	47	48	2976	114	17	5	2963	112	46	6	2951	111	14	52	2938
10	Regulus	W.	97	59	14	2538	99	39	34	2525	101	20	12	2514	103	1	6	2501

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Arietis W.	102 56 24	3136	104 23 50	3134	105 51 18	3131	107 18 50	3129
	Aldebaran W.	72 37 46	3094	74 6 3	3091	75 34 24	3086	77 2 51	3081
	Saturn W.	70 37 57	3078	72 6 33	3074	73 35 14	3071	75 3 59	3066
	Pollux W.	28 24 41	3067	29 53 31	3062	31 22 27	3057	32 51 29	3052
	Spica ♍ E.	62 25 34	3069	60 56 46	3065	59 27 54	3062	57 58 58	3059
2	Aldebaran W.	84 26 30	3058	85 55 31	3052	87 24 39	3047	88 53 53	3043
	Saturn W.	82 29 4	3044	83 58 22	3039	85 27 46	3034	86 57 16	3029
	Pollux W.	40 18 8	3027	41 47 47	3022	43 17 32	3017	44 47 24	3011
	Spica ♍ E.	50 33 10	3039	49 3 46	3035	47 34 17	3031	46 4 43	3026
	Antares E.	96 23 25	3026	94 53 44	3020	93 23 56	3016	91 54 3	3010
3	Aldebaran W.	96 21 41	3016	97 51 34	3010	99 21 35	3004	100 51 43	2998
	Saturn W.	94 26 25	3002	95 56 36	2997	97 26 53	2990	98 57 18	2984
	Pollux W.	52 18 29	2982	53 49 4	2977	55 19 46	2970	56 50 37	2964
	Spica ♍ E.	38 35 34	3006	37 5 29	3002	35 35 19	2999	34 5 5	2995
	Antares E.	84 22 55	2982	82 52 20	2977	81 21 38	2971	79 50 49	2965
4	Saturn W.	106 31 17	2954	108 2 28	2946	109 33 48	2940	111 5 16	2934
	Pollux W.	64 26 47	2931	65 58 26	2925	67 30 13	2918	69 2 9	2911
	Regulus W.	28 15 53	2985	29 46 25	2973	31 17 11	2961	32 48 12	2951
	Spica ♍ E.	26 32 57	2985	25 2 25	2985	23 31 53	2986	22 1 23	2989
	Antares E.	72 14 45	2933	70 43 8	2927	69 11 23	2920	67 39 29	2913
5	Pollux W.	76 44 4	2875	78 16 55	2867	79 49 56	2860	81 23 6	2852
	Regulus W.	40 26 26	2902	41 58 42	2894	43 31 9	2884	45 3 48	2876
	Antares E.	59 57 49	2878	58 25 2	2870	56 52 5	2864	55 19 0	2856
6	Pollux W.	89 11 29	2812	90 45 41	2804	92 20 4	2795	93 54 38	2787
	Regulus W.	52 49 56	2830	54 23 45	2821	55 57 45	2811	57 31 58	2803
	Antares E.	47 31 4	2818	45 56 59	2810	44 22 44	2802	42 48 18	2794
	α Aquilæ E.	96 53 50	3648	95 36 7	3635	94 18 10	3622	93 0 0	3611
7	Pollux W.	101 50 19	2742	103 26 3	2733	105 1 59	2723	106 38 8	2713
	Regulus W.	65 26 2	2756	67 1 28	2745	68 37 8	2736	70 13 0	2726
	Antares E.	34 53 31	2753	33 18 1	2744	31 42 20	2736	30 6 28	2728
	α Aquilæ E.	86 26 33	3571	85 7 27	3566	83 48 15	3562	82 28 59	3558
	Jupiter E.	105 3 31	2830	103 29 42	2821	101 55 41	2811	100 21 27	2801
	Sun E.	133 37 4	3117	132 9 15	3107	130 41 14	3095	129 12 58	3083
8	Regulus W.	78 15 44	2675	79 52 58	2663	81 30 27	2652	83 8 11	2642
	Spica ♍ W.	24 19 26	2720	25 55 40	2702	27 32 17	2686	29 9 16	2671
	Antares E.	22 4 35	2692	20 27 44	2687	18 50 47	2683	17 13 44	2680
	α Aquilæ E.	75 52 6	3558	74 32 46	3562	73 13 30	3567	71 54 20	3574
	Jupiter E.	92 26 57	2749	90 51 22	2738	89 15 33	2727	87 39 29	2716
	Sun E.	121 48 6	3025	120 18 24	3013	118 48 27	3001	117 18 15	2989
9	Regulus W.	91 20 35	2585	92 59 50	2573	94 39 22	2562	96 19 9	2549
	Spica ♍ W.	37 19 9	2599	38 58 5	2586	40 37 19	2572	42 16 53	2559
	α Aquilæ E.	65 21 0	3636	64 3 5	3655	62 45 30	3677	61 28 18	3702
	Jupiter E.	79 35 24	2659	77 57 49	2646	76 19 57	2635	74 41 50	2623
	Sun E.	109 43 21	2925	108 11 34	2912	106 39 31	2899	105 7 11	2885
10	Regulus W.	104 42 18	2489	106 23 46	2477	108 5 32	2464	109 47 36	2452

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
10	Spica ♍	W.	43 56 44	2545	45 36 55	2532	47 17 24	2519	48 58 11	2505
	α Aquilæ	E.	60 11 33	3730	58 55 18	3762	57 39 36	3798	56 24 32	3838
	Jupiter	E.	73 3 26	2611	71 24 46	2599	69 45 49	2586	68 6 35	2574
	Sun	E.	103 34 33	2873	102 1 39	2859	100 28 27	2846	98 54 59	2832
11	Spica ♍	W.	57 26 49	2438	59 9 29	2425	60 52 28	2412	62 35 46	2398
	Antares	W.	11 40 11	2514	13 21 4	2481	15 2 44	2454	16 45 2	2431
	α Aquilæ	E.	50 21 13	4126	49 11 36	4207	48 3 17	4297	46 56 22	4398
	Jupiter	E.	59 46 13	2512	58 5 17	2499	56 24 3	2487	54 42 32	2476
	Sun	E.	91 3 8	2763	89 27 51	2749	87 52 16	2735	86 16 23	2721
12	Spica ♍	W.	71 16 59	2333	73 2 11	2320	74 47 41	2308	76 33 29	2295
	Antares	W.	25 23 44	2343	27 8 41	2328	28 54 0	2313	30 39 40	2299
	Jupiter	E.	46 10 43	2416	44 27 31	2405	42 44 3	2394	41 0 20	2383
	Sun	E.	78 12 20	2652	76 34 36	2639	74 56 34	2626	73 18 14	2612
13	Spica ♍	W.	85 27 4	2234	87 14 41	2224	89 2 33	2212	90 50 43	2201
	Antares	W.	39 33 2	2234	41 20 39	2222	43 8 34	2210	44 56 46	2199
	Jupiter	E.	32 18 10	2339	30 33 8	2333	28 47 56	2328	27 2 38	2325
	Sun	E.	65 2 5	2548	63 21 59	2537	61 41 37	2526	60 1 0	2514
14	Antares	W.	54 1 54	2147	55 51 41	2139	57 41 41	2130	59 31 55	2122
	Sun	E.	51 34 3	2463	49 51 58	2455	48 9 41	2447	46 27 13	2439
15	Antares	W.	68 45 55	2088	70 37 12	2083	72 28 37	2079	74 20 9	2075
	Sun	E.	37 52 28	2411	36 9 9	2408	34 25 46	2406	32 42 20	2405
20	Sun	W.	30 48 38	2717	32 24 55	2733	34 0 51	2749	35 36 26	2765
	Aldebaran	E.	37 48 19	2470	36 6 23	2496	34 25 4	2524	32 44 24	2553
	Saturn	E.	40 11 31	2407	38 28 7	2426	36 45 10	2446	35 2 41	2466
	Pollux	E.	81 17 51	2365	79 33 26	2382	77 49 26	2400	76 5 51	2417
21	Sun	W.	43 28 45	2854	45 2 3	2872	46 34 58	2891	48 7 28	2909
	Venus	W.	20 5 58	2928	21 37 42	2947	23 9 1	2966	24 39 57	2985
	Aldebaran	E.	24 32 33	2750	22 57 0	2805	21 22 38	2869	19 49 40	2944
	Saturn	E.	26 37 34	2576	24 58 6	2601	23 19 12	2628	21 40 55	2655
	Pollux	E.	67 34 11	2507	65 53 7	2525	64 12 28	2543	62 32 15	2561
	Regulus	E.	104 0 45	2518	102 19 57	2536	100 39 34	2553	98 59 35	2572
22	Sun	W.	55 44 6	3002	57 14 16	3021	58 44 3	3039	60 13 27	3057
	Venus	W.	32 8 38	3080	33 37 12	3100	35 5 22	3118	36 33 10	3137
	α Arietis	W.	23 1 10	3160	24 28 7	3116	25 55 57	3084	27 24 26	3060
	Pollux	E.	54 17 18	2651	52 39 32	2669	51 2 10	2686	49 25 11	2703
	Regulus	E.	90 45 51	2661	89 8 18	2678	87 31 9	2696	85 54 23	2713
23	Sun	W.	67 35 1	3144	69 2 17	3161	70 29 13	3177	71 55 49	3193
	Venus	W.	43 46 37	3226	45 12 15	3243	46 37 33	3260	48 2 31	3276
	α Arietis	W.	34 52 7	3010	36 22 7	3010	37 52 7	3010	39 22 7	3012
	Pollux	E.	41 25 55	2786	39 51 9	2802	38 16 44	2818	36 42 40	2833
	Regulus	E.	77 56 9	2795	76 21 35	2811	74 47 22	2826	73 13 28	2841
24	Sun	W.	79 4 17	3267	80 29 7	3281	81 53 41	3294	83 18 0	3307
	Venus	W.	55 2 45	3353	56 25 55	3366	57 48 50	3379	59 11 30	3393
	α Arietis	W.	46 51 4	3035	48 20 33	3042	49 49 54	3048	51 19 7	3055
	Aldebaran	W.	16 59 12	3349	18 22 27	3294	19 46 45	3253	21 11 51	3222

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
10	Spica ♍	W.	50 39 17	2492	52 20 42	2478	54 2 26	2465	55 44 28	2452
	α Aquilæ	E.	55 10 9	3883	53 56 32	3934	52 43 47	3990	51 31 58	4055
	Jupiter	E.	66 27 5	2562	64 47 18	2549	63 7 13	2538	61 26 52	2525
	Sun	E.	97 21 12	2818	95 47 8	2804	94 12 46	2791	92 38 6	2777
11	Spica ♍	W.	64 19 23	2385	66 3 19	2373	67 47 33	2359	69 32 7	2346
	Antares	W.	18 27 52	2410	20 11 12	2392	21 54 58	2375	23 39 9	2358
	α Aquilæ	E.	45 50 59	4511	44 47 17	4640	43 45 27	4784	42 45 38	4948
	Jupiter	E.	53 0 45	2463	51 18 39	2451	49 36 17	2439	47 53 38	2428
	Sun	E.	84 40 11	2767	83 3 41	2694	81 26 53	2680	79 49 46	2666
12	Spica ♍	W.	78 19 36	2283	80 6 1	2270	81 52 45	2258	83 39 46	2247
	Antares	W.	32 25 41	2285	34 12 2	2272	35 58 43	2259	37 45 43	2246
	Jupiter	E.	39 16 21	2373	37 32 8	2364	35 47 41	2355	34 3 2	2346
	Sun	E.	71 39 35	2599	70 0 39	2586	68 21 25	2574	66 41 54	2561
13	Spica ♍	W.	92 39 9	2191	94 27 50	2181	96 16 47	2171	98 5 59	2161
	Antares	W.	46 45 15	2188	48 34 1	2177	50 23 3	2167	52 12 21	2157
	Jupiter	E.	25 17 15	2324	23 31 50	2325	21 46 27	2331	20 1 13	2341
	Sun	E.	58 20 6	2503	56 38 57	2492	54 57 33	2482	53 15 55	2472
14	Antares	W.	61 22 21	2114	63 12 59	2107	65 3 48	2100	66 54 47	2094
	Sun	E.	44 44 34	2432	43 1 45	2426	41 18 47	2420	39 35 41	2415
15	Antares	W.	76 11 46	2072	78 3 29	2069	79 55 16	2067	81 47 6	2066
	Sun	E.	30 58 53	2405	29 15 25	2406	27 31 59	2409	25 48 37	2414
20	Sun	W.	37 11 40	2782	38 46 31	2800	40 20 59	2818	41 55 4	2836
	Aldebaran	E.	31 4 25	2586	29 25 11	2621	27 46 45	2660	26 9 11	2702
	Saturn	E.	33 20 40	2487	31 39 8	2508	29 58 6	2530	28 17 34	2553
	Pollux	E.	74 22 41	2435	72 39 56	2453	70 57 36	2470	69 15 41	2488
21	Sun	W.	49 39 35	2928	51 11 18	2946	52 42 38	2966	54 13 33	2984
	Venus	W.	26 10 29	3004	27 40 37	3023	29 10 21	3042	30 39 42	3062
	Aldebaran	E.	18 18 17	3036	16 48 49	3152	15 21 43	3301	13 57 33	3499
	Saturn	E.	20 3 15	2687	18 26 18	2721	16 50 6	2761	15 14 47	2808
	Pollux	E.	60 52 26	2579	59 13 2	2597	57 34 3	2615	55 55 29	2632
	Regulus	E.	97 20 2	2590	95 40 53	2607	94 2 8	2625	92 23 47	2643
22	Sun	W.	61 42 29	3075	63 11 9	3093	64 39 27	3110	66 7 24	3127
	Venus	W.	38 0 35	3155	39 27 38	3173	40 54 19	3191	42 20 39	3209
	α Arietis	W.	28 53 24	3041	30 22 46	3029	31 52 23	3020	33 22 11	3014
	Pollux	E.	47 48 35	2720	46 12 22	2737	44 36 31	2753	43 1 2	2770
	Regulus	E.	84 18 0	2730	82 42 0	2746	81 6 21	2763	79 31 5	2779
23	Sun	W.	73 22 7	3209	74 48 6	3224	76 13 47	3239	77 39 10	3253
	Venus	W.	49 27 10	3292	50 51 31	3308	52 15 33	3324	53 39 17	3338
	α Arietis	W.	40 52 5	3016	42 21 58	3020	43 51 46	3024	45 21 29	3030
	Pollux	E.	35 8 55	2848	33 35 30	2863	32 2 24	2878	30 29 37	2892
	Regulus	E.	71 39 54	2856	70 6 39	2871	68 33 43	2885	67 1 5	2899
24	Sun	W.	84 42 4	3319	86 5 53	3330	87 29 30	3342	88 52 53	3353
	Venus	W.	60 33 54	3406	61 56 4	3418	63 18 0	3429	64 39 44	3440
	α Arietis	W.	52 48 12	3061	54 17 9	3068	55 45 58	3074	57 14 39	3081
	A	W.	37 34	3198	24 3 45	3181	25 30 17	3168	26 57 5	3158

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Saturn	W.	12 37 33	3104	14 5 38	3083	15 34 9	3069	17 2 56	3061
	Pollux	E.	28 57 8	2905	27 24 56	2920	25 53 3	2933	24 21 26	2947
	Regulus	E.	65 28 45	2912	63 56 42	2925	62 24 55	2938	60 53 25	2950
25	Sun	W.	90 16 3	3363	91 39 2	3373	93 1 49	3382	94 24 26	3391
	Venus	W.	66 1 15	3451	67 22 34	3462	68 43 41	3471	70 4 38	3480
	α Arietis	W.	58 43 12	3087	60 11 38	3093	61 39 56	3099	63 8 7	3105
	Aldebaran	W.	28 24 5	3150	29 51 14	3145	31 18 29	3141	32 45 49	3138
	Saturn	W.	24 27 54	3064	25 56 47	3068	27 25 36	3073	28 54 19	3078
	Regulus	E.	53 19 36	3007	51 49 32	3017	50 19 40	3026	48 50 0	3036
	Spica ♍	E.	107 21 38	2997	105 51 21	3005	104 21 14	3014	102 51 18	3022
26	Sun	W.	101 15 9	3428	102 36 54	3434	103 58 32	3439	105 20 4	3444
	Venus	W.	76 47 1	3517	78 7 6	3524	79 27 4	3529	80 46 56	3534
	α Arietis	W.	70 27 23	3129	71 54 57	3133	73 22 26	3137	74 49 51	3140
	Aldebaran	W.	40 2 56	3135	41 30 23	3136	42 57 49	3136	44 25 15	3136
	Saturn	W.	36 16 30	3100	37 44 40	3103	39 12 46	3107	40 40 47	3110
	Regulus	E.	41 24 25	3078	39 55 48	3085	38 27 20	3092	36 59 1	3100
	Spica ♍	E.	95 23 59	3056	93 54 55	3061	92 25 57	3066	90 57 6	3070
27	Sun	W.	112 6 33	3461	113 27 41	3463	114 48 47	3464	116 9 51	3465
	Venus	W.	87 25 6	3551	88 44 34	3553	90 4 0	3554	91 23 25	3555
	α Arietis	W.	82 6 4	3152	83 33 11	3153	85 0 16	3154	86 27 20	3154
	Aldebaran	W.	51 42 21	3136	53 9 47	3136	54 37 13	3134	56 4 41	3134
	Saturn	W.	48 0 3	3121	49 27 47	3123	50 55 29	3123	52 23 11	3124
	Regulus	E.	29 39 34	3134	28 12 6	3143	26 44 48	3151	25 17 40	3160
	Spica ♍	E.	83 33 59	3086	82 5 32	3088	80 37 8	3089	79 8 45	3090
28	Sun	W.	122 55 5	3463	124 16 10	3462	125 37 17	3460	126 58 26	3457
	Venus	W.	98 0 23	3552	99 19 50	3550	100 39 19	3548	101 58 50	3545
	Aldebaran	W.	63 22 24	3124	64 50 4	3122	66 17 47	3118	67 45 35	3115
	Saturn	W.	59 41 43	3119	61 9 29	3117	62 37 18	3115	64 5 9	3112
	Pollux	W.	19 3 56	3098	20 32 8	3093	22 0 26	3089	23 28 49	3085
	Spica ♍	E.	71 46 57	3088	70 18 33	3087	68 50 8	3085	67 21 40	3083
29	Venus	W.	108 37 20	3525	109 57 16	3521	111 17 17	3515	112 37 25	3509
	Aldebaran	W.	75 5 39	3094	76 33 56	3089	78 2 19	3084	79 30 48	3078
	Saturn	W.	71 25 24	3094	72 53 41	3090	74 22 3	3084	75 50 32	3079
	Pollux	W.	30 52 4	3062	32 21 0	3056	33 50 3	3052	35 19 12	3046
	Spica ♍	E.	59 58 34	3067	58 29 44	3064	57 0 50	3059	55 31 50	3054
	Antares	E.	105 50 7	3058	104 21 6	3053	102 51 59	3048	101 22 45	3043
30	Aldebaran	W.	86 55 2	3048	88 24 16	3041	89 53 38	3034	91 23 9	3026
	Saturn	W.	83 14 39	3049	84 43 51	3042	86 13 12	3035	87 42 41	3028
	Pollux	W.	42 46 49	3014	44 16 45	3007	45 46 49	3000	47 17 2	2993
	Spica ♍	E.	48 5 20	3028	46 35 42	3022	45 5 56	3017	43 36 4	3010
	Antares	E.	93 54 56	3013	92 24 59	3006	90 54 54	3000	89 24 41	2992
31	Aldebaran	W.	98 53 0	2989	100 23 27	2981	101 54 3	2973	103 24 49	2965
	Saturn	W.	95 12 24	2989	96 42 50	2981	98 13 26	2973	99 44 12	2965
	Pollux	W.	54 50 30	2953	56 21 42	2945	57 53 4	2936	59 24 37	2928
	Regulus	W.	18 51 15	3075	20 19 55	3050	21 49 6	3028	23 18 44	3008
	Spica ♍	E.	36 4 49	2980	34 34 11	2974	33 3 26	2969	31 32 35	2963
	Antares	E.	81 51 12	2954	80 20 1	2946	78 48 40	2937	77 17 8	2928

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Saturn W.	18 31 53	3058	20 0 54	3057	21 29 56	3058	22 58 57	3061
	Pollux E.	22 50 7	2961	21 19 5	2974	19 48 19	2987	18 17 50	3001
	Regulus E.	59 22 10	2962	57 51 10	2974	56 20 25	2985	54 49 54	2996
25	Sun W.	95 46 53	3400	97 9 10	3408	98 31 18	3415	99 53 17	3422
	Venus W.	71 25 24	3489	72 46 1	3497	74 6 29	3504	75 26 49	3511
	α Arietis W.	64 36 10	3110	66 4 8	3115	67 31 59	3120	68 59 44	3125
	Aldebaran W.	34 13 12	3137	35 40 37	3136	37 8 3	3135	38 35 30	3136
	Saturn W.	30 22 56	3082	31 51 28	3087	33 19 54	3091	34 48 14	3095
	Regulus E.	47 20 32	3044	45 51 14	3054	44 22 8	3061	42 53 11	3070
	Spica ♍ E.	101 21 33	3029	99 51 56	3037	98 22 29	3043	96 53 10	3050
26	Sun W.	106 41 31	3449	108 2 52	3452	109 24 10	3456	110 45 23	3459
	Venus W.	82 6 42	3538	83 26 24	3542	84 46 2	3545	86 5 36	3549
	α Arietis W.	76 17 12	3143	77 44 29	3145	79 11 44	3148	80 38 55	3150
	Aldebaran W.	45 52 41	3137	47 20 6	3137	48 47 31	3137	50 14 56	3137
	Saturn W.	42 8 44	3113	43 36 38	3115	45 4 29	3118	46 32 17	3119
	Regulus E.	35 30 51	3106	34 2 49	3113	32 34 55	3120	31 7 10	3128
	Spica ♍ E.	89 28 20	3074	87 59 39	3078	86 31 2	3081	85 2 29	3083
27	Sun W.	117 30 54	3466	118 51 56	3466	120 12 58	3465	121 34 1	3464
	Venus W.	92 42 48	3555	94 2 12	3555	95 21 35	3555	96 40 59	3554
	α Arietis W.	87 54 24	3155	89 21 27	3155	90 48 30	3154	92 15 34	3153
	Aldebaran W.	57 32 9	3132	58 59 40	3131	60 27 12	3129	61 54 46	3126
	Saturn W.	53 50 52	3123	55 18 34	3123	56 46 16	3122	58 13 59	3121
	Regulus E.	23 50 43	3170	22 23 58	3183	20 57 28	3197	19 31 15	3214
	Spica ♍ E.	77 40 23	3090	76 12 1	3091	74 43 40	3091	73 15 19	3090
28	Sun W.	128 19 38	3455	129 40 53	3452	131 2 11	3447	132 23 34	3444
	Venus W.	103 18 24	3542	104 38 2	3539	105 57 43	3535	107 17 29	3530
	Aldebaran W.	69 13 26	3111	70 41 22	3108	72 9 22	3103	73 37 28	3099
	Saturn W.	65 33 4	3109	67 1 2	3105	68 29 5	3102	69 57 12	3098
	Pollux W.	24 57 17	3080	26 25 51	3076	27 54 30	3072	29 23 14	3067
	Spica ♍ E.	65 53 10	3081	64 24 37	3078	62 56 0	3074	61 27 19	3071
29	Venus W.	113 57 39	3503	115 18 0	3497	116 38 28	3490	117 59 3	3483
	Aldebaran W.	80 59 24	3072	82 28 8	3067	83 56 58	3061	85 25 56	3054
	Saturn W.	77 19 7	3074	78 47 49	3068	80 16 38	3061	81 45 35	3056
	Pollux W.	36 48 28	3039	38 17 52	3034	39 47 23	3027	41 17 2	3021
	Spica ♍ E.	54 2 44	3050	52 33 33	3044	51 4 15	3039	49 34 51	3034
	Antares E.	99 53 26	3037	98 23 59	3032	96 54 26	3026	95 24 45	3019
30	Aldebaran W.	92 52 49	3019	94 22 38	3012	95 52 36	3005	97 22 43	2997
	Saturn W.	89 12 19	3021	90 42 6	3013	92 12 2	3005	93 42 8	2997
	Pollux W.	48 47 24	2985	50 17 56	2977	51 48 37	2969	53 19 29	2961
	Spica ♍ E.	42 6 4	3005	40 35 57	2998	39 5 42	2992	37 35 19	2986
	Antares E.	87 54 18	2985	86 23 46	2977	84 53 4	2970	83 22 13	2962
31	Aldebaran W.	104 55 45	2957	106 26 51	2949	107 58 8	2942	109 29 34	2933
	Saturn W.	101 15 9	2956	102 46 17	2948	104 17 35	2939	105 49 5	2930
	Pollux W.	60 56 21	2919	62 28 16	2909	64 0 23	2901	65 32 40	2892
	Regulus W.	24 48 47	2991	26 19 11	2974	27 49 56	2959	29 21 0	2944
	Spica ♍ E.	30 1 36	2959	28 30 32	2954	26 59 22	2951	25 28 8	2948
	Antares E.	75 45 25	2920	74 13 31	2912	72 41 27	2902	71 9 11	2894

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 17h 30m, Mean Time.

Day of the Month.	West.	East.
1	·3 4·	○ 1· ·2
2	4· ·3	○ 2· ●·1
3	4· ·2 1·	○ ·3
4	4	○ ·1 ·3 ●·2
5	·4 1·	○ 2· 3·
6	·4 2·	○ 3· 1·
7	4 3· ·2 ·1	○
8	.3	○ 1· ·2 ●·4
9	·3 ·1	○ 2· ·4
10	1·○ 2·	○ ·3 ·4
11	·2●	○ ·1 ·3 ·4
12	1·	○ 2· 3· ·4
13	2·	○ 3· ·1 4·
14	3· ·1	○ 4·
15	.3	○ 1· ·2 4·
16	·3 ·1	○ 2· 4·
17	2· 4·	○ 1· 3·
18	4· ·2	○ ·3 ●·1
19	4· 1·	○ 2· 3·
20	4·	○ ·1 3· ○·2
21	4 ·2 3· ·1	○
22	·4 3·	○ ·2 1·
23	·4 ·3 ·1	○ 2·
24	·4 2·	○ 1· ●·3
25	·1● ·2	·4○ ·3
26	1·	○ 4· 3·
27		○ 2· ·1 3· ·4
28	.2 1·3·	○ ·4
29	3·	○ ·2 1· ·4
30	·3 ·1	○ 2· 4·
31	2· ·3	○ 1· 4·

This Table represents, at 17h 30m after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shadow, of Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d.660705$ / $0^d.418488$ Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	−1·2480	+0·8252	−8·8197	−0·8338	1 24 51·98	343	59	·162
2	1·2505	0·8027	8·8045	0·8349	1 20 56·08	344	60	·164
3	1·2529	0·7788	8·7890	0·8360	1 17 0·17	345	61	·167
4	−1·2552	+0·7534	−8·7729	−0·8371	1 13 4·26	346	62	·170
5	1·2573	0·7262	8·7564	0·8381	1 9 8·35	347	63	·172
6	1·2593	0·6971	8·7394	0·8390	1 5 12·45	348	64	·175
7	−1·2611	+0·6658	−8·7218	−0·8399	1 1 16·54	349	65	·178
8	1·2628	0·6320	8·7035	0·8408	0 57 20·63	350	66	·181
9	1·2644	0·5951	8·6845	0·8417	0 53 24·72	351	67	·183
10	−1·2658	+0·5547	−8·6647	−0·8425	0 49 28·82	352	68	·186
11	1·2671	0·5101	8·6441	0·8432	0 45 32·91	353	69	·189
12	1·2682	0·4602	8·6226	0·8439	0 41 37·00	354	70	·192
13	−1·2692	+0·4037	−8·6001	−0·8446	0 37 41·09	355	71	·194
14	1·2701	0·3386	8·5763	0·8453	0 33 45·18	356	72	·197
15	1·2708	0·2619	8·5512	0·8459	0 29 49·28	357	73	·200
16	−1·2715	+0·1685	−8·5247	−0·8464	0 25 53·37	358	74	·203
17	1·2719	0·0493	8·4967	0·8469	0 21 57·46	359	75	·205
18	1·2723	9·8844	8·4667	0·8474	0 18 1·55	360	76	·208
19	−1·2725	+9·6154	−8·4344	−0·8478	0 14 5·65	361	77	·211
20	1·2726	+8·7687	8·3997	0·8482	0 10 9·74	362	78	·214
21	1·2725	−9·4697	8·3617	0·8486	0 6 13·83	363	79	·216
22	−1·2724	−9·8117	−8·3202	−0·8489	{ 0 0 17·92 / 23 58 22·01 }	364	80	·219
23	1·2721	0·0005	8·2742	0·8492	23 54 26·11	0	81	·222
24	1·2716	0·1314	8·2225	0·8494	23 50 30·20	1	82	·225
25	−1·2711	−0·2318	−8·1638	−0·8496	23 46 34·29	2	83	·227
26	1·2704	0·3131	8·0955	0·8497	23 42 38·38	3	84	·230
27	1·2696	0·3814	8·0145	0·8499	23 38 42·48	4	85	·233
28	−1·2686	−0·4402	−7·9143	−0·8499	23 34 46·57	5	86	·235
29	1·2675	0·4919	7·7839	0·8499	23 30 50·66	6	87	·238
30	1·2663	0·5379	7·5933	0·8499	23 26 54·75	7	88	·241
31	1·2650	0·5794	−7·2430	0·8499	23 22 58·85	8	89	·244
32	−1·2635	−0·6171	+6·6233	−0·8498	23 19 2·94	9	90	·246

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time, of the Semidiam. passing the Meridian.*	Equation of Time, *to be added to* / *subt. from Apparent Time.*	D f 1 h
		h m s	s	° ′ ″	″	m s	m s	s
Sun.	1	0 41 11·73	9·093	N. 4 26 12·2	57·77	1 4·48	4 3·83	0·
Mon.	2	0 44 49·96	9·098	4 49 18·7	57·56	1 4·50	3 45·55	0·
Tues.	3	0 48 28·32	9·104	5 12 20·0	57·33	1 4·52	3 27·40	0·
Wed.	4	0 52 6·82	9·112	5 35 15·9	57·09	1 4·54	3 9·40	0·
Thur.	5	0 55 45·49	9·120	5 58 6·0	56·83	1 4·57	2 51·58	0·
Frid.	6	0 59 24·36	9·129	6 20 50·0	56·56	1 4·59	2 33·94	0·
Sat.	7	1 3 3·43	9·138	6 43 27·5	56·28	1 4·62	2 16·50	0·
Sun.	8	1 6 42·74	9·148	7 5 58·3	55·99	1 4·65	1 59·30	0·
Mon.	9	1 10 22·29	9·159	7 28 22·1	55·68	1 4·69	1 42·35	0·
Tues.	10	1 14 2·10	9·171	7 50 38·4	55·36	1 4·73	1 25·65	0·
Wed.	11	1 17 42·21	9·184	8 12 46·9	55·02	1 4·77	1 9·25	0·
Thur.	12	1 21 22·62	9·197	8 34 47·4	54·67	1 4·81	0 53·14	0·
Frid.	13	1 25 3·33	9·210	8 56 39·4	54·30	1 4·86	0 37·35	0·
Sat.	14	1 28 44·38	9·224	9 18 22·6	53·92	1 4·91	0 21·89	0·
Sun.	15	1 32 25·77	9·239	9 39 56·7	53·52	1 4·96	0 6·76	0·
Mon.	16	1 36 7·51	9·254	10 1 21·2	53·11	1 5·01	0 8·01	0·
Tues.	17	1 39 49·63	9·270	10 22 35·8	52·68	1 5·06	0 22·41	0·
Wed.	18	1 43 32·11	9·286	10 43 40·2	52·24	1 5·12	0 36·43	0·
Thur.	19	1 47 14·99	9·303	11 4 33·9	51·78	1 5·18	0 50·08	0·
Frid.	20	1 50 58·27	9·320	11 25 16·7	51·31	1 5·24	1 3·32	0·
Sat.	21	1 54 41·95	9·338	11 45 48·2	50·83	1 5·30	1 16·16	0·
Sun.	22	1 58 26·06	9·356	12 6 8·0	50·33	1 5·37	1 28·57	0·
Mon.	23	2 2 10·59	9·374	12 26 15·8	49·81	1 5·44	1 40·57	0·
Tues.	24	2 5 55·56	9·393	12 46 11·2	49·28	1 5·50	1 52·12	0·
Wed.	25	2 9 40·98	9·412	13 5 54·0	48·74	1 5·57	2 3·22	0·
Thur.	26	2 13 26·87	9·432	13 25 23·8	48·19	1 5·64	2 13·85	0·
Frid.	27	2 17 13·24	9·452	13 44 40·2	47·62	1 5·72	2 24·01	0·
Sat.	28	2 21 0·10	9·473	14 3 43·1	47·04	1 5·79	2 33·68	0·
Sun.	29	2 24 47·45	9·494	14 22 32·0	46·45	1 5·87	2 42·86	0·
Mon.	30	2 28 35·32	9·517	14 41 6·7	45·85	1 5·94	2 51·51	0·
Tues.	31	2 32 23·72		N. 14 59 27·0		1 6·02	2 59·65	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ˢ·18 from the *Sidereal* T

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be subt. from* / *added to Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Sun.	1	0 41 11·11	N. 4 26 8·3	16 1·9	4 3·88	0 37 7·23
Mon.	2	0 44 49·39	4 49 15·1	16 1·7	3 45·60	0 41 3·79
Tues.	3	0 48 27·79	5 12 16·7	16 1·4	3 27·45	0 45 0·34
Wed.	4	0 52 6·34	5 35 12·9	16 1·1	3 9·44	0 48 56·90
Thur.	5	0 55 45·06	5 58 3·3	16 0·8	2 51·61	0 52 53·45
Frid.	6	0 59 23·97	6 20 47·6	16 0·5	2 33·97	0 56 50·00
Sat.	7	1 3 3·09	6 43 25·4	16 0·2	2 16·53	1 0 46·56
Sun.	8	1 6 42·43	7 5 56·5	16 0·0	1 59·32	1 4 43·11
Mon.	9	1 10 22·03	7 28 20·5	15 59·7	1 42·37	1 8 39·66
Tues.	10	1 14 1·89	7 50 37·1	15 59·4	1 25·67	1 12 36·22
Wed.	11	1 17 42·03	8 12 45·9	15 59·1	1 9·26	1 16 32·77
Thur.	12	1 21 22·48	8 34 46·6	15 58·9	0 53·15	1 20 29·33
Frid.	13	1 25 3·24	8 56 38·9	15 58·6	0 37·36	1 24 25·88
Sat.	14	1 28 44·33	9 18 22·3	15 58·3	0 21·90	1 28 22·43
Sun.	15	1 32 25·75	9 39 56·6	15 58·0	0 6·76	1 32 18·99
Mon.	16	1 36 7·53	10 1 21·3	15 57·8	0 8·01	1 36 15·54
Tues.	17	1 39 49·68	10 22 36·1	15 57·5	0 22·42	1 40 12·10
Wed.	18	1 43 32·21	10 43 40·7	15 57·3	0 36·44	1 44 8·65
Thur.	19	1 47 15·12	11 4 34·6	15 57·0	0 50·09	1 48 5·21
Frid.	20	1 50 58·43	11 25 17·6	15 56·8	1 3·33	1 52 1·76
Sat.	21	1 54 42·15	11 45 49·3	15 56·5	1 16·17	1 55 58·32
Sun.	22	1 58 26·29	12 6 9·3	15 56·3	1 28·59	1 59 54·87
Mon.	23	2 2 10·85	12 26 17·2	15 56·0	1 40·58	2 3 51·43
Tues.	24	2 5 55·85	12 46 12·7	15 55·8	1 52·13	2 7 47·98
Wed.	25	2 9 41·30	13 5 55·6	15 55·5	2 3·24	2 11 44·54
Thur.	26	2 13 27·22	13 25 25·5	15 55·3	2 13·87	2 15 41·09
Frid.	27	2 17 13·62	13 44 42·1	15 55·0	2 24·03	2 19 37·65
Sat.	28	2 21 0·50	14 3 45·1	15 54·8	2 33·70	2 23 34·20
Sun.	29	2 24 47·88	14 22 34·1	15 54·5	2 42·88	2 27 30·76
Mon.	30	2 28 35·78	14 41 8·9	15 54·3	2 51·53	2 31 27·31
Tues.	31	2 32 24·20	N. 14 59 29·2	15 54·0	2 59·67	2 35 23·87

rent Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax. *Noon.*	THE MOON'S Horizontal Parallax. *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	11 12 5·8	N.0·29	9·9999542	15 3·1	15 6·7	55 7·7	55 20·5
2	12 11 11·7	0·18	0·0000794	15 10·3	15 14·1	55 34·0	55 48·1
3	13 10 15·6	N.0·06	0·0002050	15 18·1	15 22·1	56 2·7	56 17·4
4	14 9 17·6	S.0·06	0·0003311	15 26·2	15 30·3	56 32·3	56 47·2
5	15 8 17·7	0·19	0·0004577	15 34·3	15 38·4	57 2·2	57 17·0
6	16 7 16·0	0·32	0·0005846	15 42·4	15 46·4	57 31·8	57 46·4
7	17 6 12·5	0·44	0·0007115	15 50·3	15 54·2	58 0·7	58 14·9
8	18 5 7·2	0·53	0·0008384	15 58·0	16 1·6	58 28·7	58 42·0
9	19 4 0·1	0·60	0·0009651	16 5·2	16 8·5	58 54·8	59 7·0
10	20 2 51·3	0·65	0·0010914	16 11·5	16 14·3	59 18·4	59 28·6
11	21 1 40·9	0·66	0·0012172	16 16·7	16 18·7	59 37·4	59 44·5
12	22 0 28·7	0·65	0·0013422	16 20·1	16 20·9	59 49·7	59 52·7
13	22 59 14·7	0·61	0·0014665	16 21·1	16 20·4	59 53·2	59 50·9
14	23 57 58·9	0·54	0·0015898	16 19·0	16 16·8	59 45·8	59 37·7
15	24 56 41·3	0·43	0·0017122	16 13·8	16 10·0	59 26·7	59 12·9
16	25 55 21·8	0·32	0·0018334	16 5·6	16 0·6	58 56·7	58 38·4
17	26 54 0·4	0·19	0·0019532	15 55·1	15 49·2	58 18·2	57 56·7
18	27 52 37·1	S.0·05	0·0020718	15 43·1	15 36·8	57 34·2	57 11·1
19	28 51 11·7	N.0·08	0·0021892	15 30·5	15 24·3	56 48·1	56 25·4
20	29 49 44·2	0·21	0·0023054	15 18·4	15 12·8	56 3·7	55 43·3
21	30 48 14·7	0·33	0·0024206	15 7·7	15 3·0	55 24·6	55 7·8
22	31 46 43·1	0·42	0·0025346	14 59·1	14 55·7	54 53·0	54 40·6
23	32 45 9·2	0·49	0·0026476	14 53·0	14 50·9	54 30·6	54 23·2
24	33 43 33·2	0·53	0·0027597	14 49·6	14 49·0	54 18·4	54 16·1
25	34 41 55·0	0·54	0·0028709	14 49·0	14 49·9	54 16·4	54 19·2
26	35 40 14·7	0·52	0·0029814	14 51·3	14 53·3	54 24·4	54 31·8
27	36 38 32·4	0·47	0·0030912	14 55·9	14 59·0	54 41·3	54 52·6
28	37 36 48·1	0·39	0·0032004	15 2·5	15 6·5	55 5·7	55 20·2
29	38 35 1·8	0·29	0·0033092	15 10·8	15 15·4	55 35·9	55 52·6
30	39 33 13·6	0·18	0·0034175	15 20·1	15 24·9	56 10·0	56 27·6
31	40 31 23·6	N.0·05	0·0035252	15 29·8	15 34·6	56 45·4	57 2

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Sun.	1	178 33 1·3	184 44 56·0	N. 3 38 42·3	N. 3 13 29·4	14·3	11 43·0
Mon.	2	190 59 41·1	197 17 20·3	2 45 44·5	2 15 44·0	15·3	12 24·9
Tues.	3	203 37 57·8	210 1 35·4	1 43 46·4	N. 1 10 13·5	16·3	13 8·5
Wed.	4	216 28 15·4	222 57 59·8	N. 0 35 28·8	S. 0 0 2·2	17·3	13 54·8
Thur.	5	229 30 50·5	236 6 50·0	S. 0 35 51·8	1 11 31·5	18·3	14 44·8
Frid.	6	242 46 0·9	249 28 25·8	1 46 31·2	2 20 21·0	19·3	15 39·0
Sat.	7	256 14 7·5	263 3 8·0	2 52 30·5	3 22 29·2	20·3	16 37·2
Sun.	8	269 55 28·1	276 51 7·5	3 49 47·9	4 13 59·0	21·3	17 37·9
Mon.	9	283 50 3·2	290 52 9·4	4 34 36·0	4 51 15·1	22·3	18 39·1
Tues.	10	297 57 16·4	305 5 10·6	5 3 36·1	5 11 21·7	23·3	19 38·6
Wed.	11	312 15 33·5	319 28 1·3	5 14 19·6	5 12 21·7	24·3	20 35·0
Thur.	12	326 42 5·7	333 57 12·9	5 5 26·8	4 53 37·9	25·3	21 28·2
Frid.	13	341 12 45·2	348 28 1·3	4 37 6·2	4 16 8·0	26·3	22 18·6
Sat.	14	355 42 18·1	2 54 51·0	3 51 5·8	3 22 27·8	27·3	23 7·5
Sun.	15	10 4 56·9	17 11 55·0	2 50 46·5	2 16 37·8	28·3	23 55·9
Mon.	16	24 15 7·4	31 14 2·1	1 40 39·6	S. 1 3 30·9	29·3	♂
Tues.	17	38 8 12·5	44 57 18·4	S. 0 25 49·6	N. 0 11 47·5	0·9	0 44·9
Wed.	18	51 41 6·6	58 19 30·7	N. 0 48 46·7	1 24 37·0	1·9	1 35·3
Thur.	19	64 52 31·1	71 20 14·2	1 58 51·6	2 31 6·8	2·9	2 27·2
Frid.	20	77 42 52·5	84 0 43·7	3 1 3·3	3 28 24·8	3·9	3 20·5
Sat.	21	90 14 9·6	96 23 35·8	3 52 58·3	4 14 33·7	4·9	4 14·2
Sun.	22	102 29 31·4	108 32 27·3	4 33 3·0	4 48 20·5	5·9	5 7·1
Mon.	23	114 32 56·3	120 31 32·8	5 0 21·4	5 9 3·0	6·9	5 58·0
Tues.	24	126 28 51·0	132 25 26·0	5 14 23·3	5 16 20·9	7·9	6 46·3
Wed.	25	138 21 52·5	144 18 44·0	5 14 55·9	5 10 8·4	8·9	7 32·0
Thur.	26	150 16 33·6	156 15 52·4	5 1 59·6	4 50 32·1	9·9	8 15·4
Frid.	27	162 17 10·1	168 20 54·0	4 35 49·4	4 17 55·8	10·9	8 57·3
Sat.	28	174 27 28·6	180 37 15·9	3 56 58·4	3 33 5·2	11·9	9 38·5
Sun.	29	186 50 34·3	193 7 39·2	3 6 27·3	2 37 18·3	12·9	10 20·1
Mon.	30	199 28 41·6	205 53 49·5	2 5 54·1	1 32 33·9	13·9	11 3·2
Tues.	31	212 23 6·4	218 56 32·0	N. 0 57 40·2	N. 0 21 38·3	14·9	11 49·0

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 1.				*TUESDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	12 0 29·63	N. 3 55 13·7	141·28	0	13 30 3·60	S. 7 34 31·7	142·43
1	12 2 19·75	3 41 6·0	141·53	1	13 31 59·07	7 48 46·3	142·20
2	12 4 9·88	3 26 56·8	141·77	2	13 33 54·75	8 2 59·5	141·97
3	12 6 0·04	3 12 46·2	141·98	3	13 35 50·65	8 17 11·3	141·73
4	12 7 50·22	2 58 34·3	142·20	4	13 37 46·77	8 31 21·7	141·47
5	12 9 40·44	2 44 21·1	142·42	5	13 39 43·12	8 45 30·5	141·18
6	12 11 30·68	2 30 6·6	142·60	6	13 41 39·69	8 59 37·6	140·92
7	12 13 20·96	2 15 51·0	142·80	7	13 43 36·49	9 13 43·1	140·62
8	12 15 11·28	2 1 34·2	142·97	8	13 45 33·54	9 27 46·8	140·32
9	12 17 1·65	1 47 16·4	143·15	9	13 47 30·82	9 41 48·7	140·00
10	12 18 52·06	1 32 57·5	143·32	10	13 49 28·35	9 55 48·7	139·67
11	12 20 42·53	1 18 37·6	143·47	11	13 51 26·12	10 9 46·7	139·32
12	12 22 33·05	1 4 16·8	143·62	12	13 53 24·15	10 23 42 6	138·98
13	12 24 23·63	0 49 55·1	143·75	13	13 55 22·44	10 37 36·5	138·60
14	12 26 14·28	0 35 32·6	143·87	14	13 57 20·99	10 51 28·1	138·23
15	12 28 5·00	0 21 9·4	144·00	15	13 59 19·80	11 5 17·5	137·85
16	12 29 55·79	N. 0 6 45·4	144·10	16	14 1 18·88	11 19 4·6	137·45
17	12 31 46·66	S. 0 7 39·2	144·20	17	14 3 18·23	11 32 49·3	137·03
18	12 33 37·60	0 22 4·4	144·30	18	14 5 17·86	11 46 31·5	136·60
19	12 35 28·63	0 36 30·2	144·37	19	14 7 17·77	12 0 11·1	136·18
20	12 37 19·75	0 50 56·4	144·45	20	14 9 17·97	12 13 48·2	135·72
21	12 39 10·96	1 5 23·1	144·50	21	14 11 18·45	12 27 22·5	135·25
22	12 41 2·27	1 19 50·1	144·57	22	14 13 19·22	12 40 54·0	134·78
23	12 42 53·68	S. 1 34 17·5	144·60	23	14 15 20·29	S. 12 54 22·7	134·30
	MONDAY 2.				*WEDNESDAY* 4.		
0	12 44 45·19	S. 1 48 45·1	144·63	0	14 17 21·66	S. 13 7 48·5	133·80
1	12 46 36·81	2 3 12·9	144·67	1	14 19 23·33	13 21 11·3	133·28
2	12 48 28·54	2 17 40·9	144·67	2	14 21 25·31	13 34 31·0	132·75
3	12 50 20·39	2 32 8·9	144·67	3	14 23 27·60	13 47 47·5	132·22
4	12 52 12·36	2 46 36·9	144·68	4	14 25 30·21	14 1 0·8	131·65
5	12 54 4·46	3 1 5·0	144·65	5	14 27 33·13	14 14 10·7	131·10
6	12 55 56·69	3 15 32·9	144·63	6	14 29 36·37	14 27 17·3	130·52
7	12 57 49·05	3 30 0·7	144·60	7	14 31 39·94	14 40 20·4	129·92
8	12 59 41·54	3 44 28·3	144·55	8	14 33 43·84	14 53 19·9	129·32
9	13 1 34·18	3 58 55·6	144·50	9	14 35 48·06	15 6 15·8	128·70
10	13 3 26·97	4 13 22·6	144·43	10	14 37 52·62	15 19 8·0	128·07
11	13 5 19·90	4 27 49·2	144·37	11	14 39 57·52	15 31 56·4	127·42
12	13 7 12·99	4 42 15·4	144·28	12	14 42 2·75	15 44 40·9	126·75
13	13 9 6·24	4 56 41·1	144·18	13	14 44 8·33	15 57 21·4	126·08
14	13 10 59·65	5 11 6·2	144·07	14	14 46 14·26	16 9 57·9	125·40
15	13 12 53·22	5 25 30·6	143·97	15	14 48 20·54	16 22 30·3	124·68
16	13 14 46·97	5 39 54·4	143·83	16	14 50 27·17	16 34 58·4	123·98
17	13 16 40·90	5 54 17·4	143·70	17	14 52 34·16	16 47 22·3	123·25
18	13 18 35·00	6 8 39·6	143·53	18	14 54 41·51	16 59 41·8	122·50
19	13 20 29·29	6 23 0·8	143·40	19	14 56 49·22	17 11 56·8	121·73
20	13 22 23·76	6 37 21·2	143·22	20	14 58 57·29	17 24 7·2	120·97
21	13 24 18·42	6 51 40·5	143·03	21	15 1 5·73	17 36 13·0	120·18
22	13 26 13·28	7 5 58·7	142·85	22	15 3 14·54	17 48 14·1	119·38
23	13 28 8·34	7 20 15·8	142·65	23	15 5 23·72	18 0 10·4	118·57
24	13 30 3·60	S. 7 34 31·7		24	15 7 33·27	S. 18 12 1·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 5.		
	h m s	° ′ ″	″
0	15 7 33·27	S. 18 12 1·8	117·73
1	15 9 43·20	18 23 48·2	116·90
2	15 11 53·52	18 35 29·6	116·03
3	15 14 4·21	18 47 5·8	115·15
4	15 16 15·29	18 58 36·7	114·27
5	15 18 26·76	19 10 2·3	113·37
6	15 20 38·61	19 21 22·5	112·45
7	15 22 50·85	19 32 37·2	111·52
8	15 25 3·48	19 43 46·3	110·57
9	15 27 16·50	19 54 49·7	109·62
10	15 29 29·92	20 5 47·4	108·63
11	15 31 43·73	20 16 39·2	107·65
12	15 33 57·94	20 27 25·1	106·63
13	15 36 12·55	20 38 4·9	105·62
14	15 38 27·55	20 48 38·6	104·58
15	15 40 42·95	20 59 6·1	103·53
16	15 42 58·76	21 9 27·3	102·47
17	15 45 14·96	21 19 42·1	101·38
18	15 47 31·57	21 29 50·4	100·28
19	15 49 48·58	21 39 52·1	99·18
20	15 52 5·98	21 49 47·2	98·05
21	15 54 23·79	21 59 35·5	96·92
22	15 56 42·01	22 9 17·0	95·77
23	15 59 0·62	S. 22 18 51·6	94·58
	FRIDAY 6.		
0	16 1 19·63	S. 22 28 19·1	93·40
1	16 3 39·05	22 37 39·5	92·22
2	16 5 58·87	22 46 52·8	90·98
3	16 8 19·08	22 55 58·7	89·77
4	16 10 39·70	23 4 57·3	88·52
5	16 13 0·72	23 13 48·4	87·25
6	16 15 22·13	23 22 31·9	85·98
7	16 17 43·94	23 31 7·8	84·70
8	16 20 6·14	23 39 36·0	83·40
9	16 22 28·73	23 47 56·4	82·08
10	16 24 51·71	23 56 8·9	80·75
11	16 27 15·08	24 4 13·4	79·40
12	16 29 38·83	24 12 9·8	78·05
13	16 32 2·97	24 19 58·1	76·67
14	16 34 27·50	24 27 38·1	75·28
15	16 36 52·40	24 35 9·8	73·90
16	16 39 17·68	24 42 33·2	72·47
17	16 41 43·34	24 49 48·0	71·03
18	16 44 9·36	24 56 54·2	69·60
19	16 46 35·75	25 3 51·8	68·15
20	16 49 2·50	25 10 40·7	66·67
21	16 51 29·61	25 17 20·7	65·20
22	16 53 57·08	25 23 51·9	63·70
23	16 56 24·91	25 30 14·1	62·18
24	16 58 53·07	S. 25 36 27·2	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 7.		
	h m s	° ′ ″	″
0	16 58 53·07	S. 25 36 27·2	60·67
1	17 1 21·59	25 42 31·2	59·13
2	17 3 50·44	25 48 26·0	57·58
3	17 6 19·63	25 54 11·5	56·03
4	17 8 49·14	25 59 47·7	54·45
5	17 11 18·98	26 5 14·4	52·87
6	17 13 49·14	26 10 31·6	51·28
7	17 16 19·61	26 15 39·3	49·67
8	17 18 50·39	26 20 37·3	48·07
9	17 21 21·48	26 25 25·7	46·42
10	17 23 52·86	26 30 4·2	44·80
11	17 26 24·52	26 34 33·0	43·13
12	17 28 56·47	26 38 51·8	41·48
13	17 31 28·70	26 43 0·7	39·80
14	17 34 1·21	26 46 59·5	38·13
15	17 36 33·98	26 50 48·3	36·43
16	17 39 7·00	26 54 26·9	34·73
17	17 41 40·28	26 57 55·3	33·03
18	17 44 13·80	27 1 13·5	31·30
19	17 46 47·56	27 4 21·3	29·58
20	17 49 21·55	27 7 18·8	27·85
21	17 51 55·76	27 10 5·9	26·12
22	17 54 30·18	27 12 42·6	24·37
23	17 57 4·81	S. 27 15 8·8	22·60
	SUNDAY 8.		
0	17 59 39·65	S. 27 17 24·4	20·83
1	18 2 14·67	27 19 29·4	19·07
2	18 4 49·88	27 21 23·8	17·30
3	18 7 25·27	27 23 7·6	15·50
4	18 10 0·82	27 24 40·6	13·72
5	18 12 36·53	27 26 2·9	11·92
6	18 15 12·39	27 27 14·4	10·12
7	18 17 48·40	27 28 15·1	8·32
8	18 20 24·54	27 29 5·0	6·50
9	18 23 0·80	27 29 44·0	4·68
10	18 25 37·18	27 30 12·1	2·85
11	18 28 13·67	27 30 29·2	1·05
12	18 30 50·26	27 30 35·5	0·78
13	18 33 26·94	27 30 30·8	2·62
14	18 36 3·70	27 30 15·1	4·45
15	18 38 40·53	27 29 48·4	6·28
16	18 41 17·43	27 29 10·7	8·13
17	18 43 54·38	27 28 21·9	9·95
18	18 46 31·38	27 27 22·2	11·80
19	18 49 8·41	27 26 11·4	13·65
20	18 51 45·47	27 24 49·5	15·48
21	18 54 22·56	27 23 16·6	17·32
22	18 56 59·65	27 21 32·7	19·17
23	18 59 36·74	27 19 37·7	21·02
24	19 2 13·83	S 27 17 31·6	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 9.				*WEDNESDAY* 11.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	19 2 13·83	S. 27 17 31·6	22·85	0	21 5 14·31	S. 22 9 31·5	103·82
1	19 4 50·90	27 15 14·5	24·70	1	21 7 42·26	21 59 8·6	105·25
2	19 7 27·95	27 12 46·3	26·52	2	21 10 9·91	21 48 37·1	106·63
3	19 10 4·97	27 10 7·2	28·37	3	21 12 37·25	21 37 57·3	108·05
4	19 12 41·94	27 7 17·0	30·20	4	21 15 4·28	21 27 9·0	109·42
5	19 15 18·86	27 4 15·8	32·02	5	21 17 31·00	21 16 12·5	110·77
6	19 17 55·72	27 1 3·7	33·87	6	21 19 57·42	21 5 7·9	112·13
7	19 20 32·52	26 57 40·5	35·67	7	21 22 23·52	20 53 55·1	113·45
8	19 23 9·24	26 54 6·5	37·50	8	21 24 49·31	20 42 34·4	114·78
9	19 25 45·87	26 50 21·5	39·32	9	21 27 14·78	20 31 5·7	116·07
10	19 28 22·41	26 46 25·6	41·13	10	21 29 39·94	20 19 29·3	117·37
11	19 30 58·86	26 42 18·8	42·93	11	21 32 4·79	20 7 45·1	118·63
12	19 33 35·20	26 38 1·2	44·73	12	21 34 29·31	19 55 53·3	119·88
13	19 36 11·42	26 33 32·8	46·53	13	21 36 53·52	19 43 54·0	121·12
14	19 38 47·51	26 28 53·6	48·32	14	21 39 17·42	19 31 47·3	122·33
15	19 41 23·47	26 24 3·7	50·12	15	21 41 41·01	19 19 33·3	123·55
16	19 43 59·29	26 19 3·0	51·88	16	21 44 4·28	19 7 12·0	124·73
17	19 46 34·97	26 13 51·7	53·67	17	21 46 27·23	18 54 43·6	125·92
18	19 49 10·49	26 8 29·7	55·42	18	21 48 49·87	18 42 8·1	127·07
19	19 51 45·85	26 2 57·2	57·20	19	21 51 12·20	18 29 25·7	128·22
20	19 54 21·04	25 57 14·0	58·93	20	21 53 34·21	18 16 36·4	129·33
21	19 56 56·06	25 51 20·4	60·67	21	21 55 55·91	18 3 40·4	130·45
22	19 59 30·90	25 45 16·4	62·42	22	21 58 17·29	17 50 37·7	131·55
23	20 2 5·54	S. 25 39 1·9	64·15	23	22 0 38·37	S. 17 37 28·4	132·62
	TUESDAY 10.				*THURSDAY* 12.		
0	20 4 39·99	S. 25 32 37·0	65·87	0	22 2 59·14	S. 17 24 12·7	133·68
1	20 7 14·24	25 26 1·8	67·57	1	22 5 19·60	17 10 50·6	134·72
2	20 9 48·28	25 19 16·4	69·28	2	22 7 39·75	16 57 22·3	135·75
3	20 12 22·10	25 12 20·7	70·97	3	22 9 59·60	16 43 47·8	136·77
4	20 14 55·71	25 5 14·9	72·63	4	22 12 19·15	16 30 7·2	137·75
5	20 17 29·09	24 57 59·1	74·32	5	22 14 38·39	16 16 20·7	138·72
6	20 20 2·24	24 50 33·2	75·98	6	22 16 57·34	16 2 28·4	139·68
7	20 22 35·16	24 42 57·3	77·62	7	22 19 15·99	15 48 30·3	140·63
8	20 25 7·84	24 35 11·6	79·27	8	22 21 34·35	15 34 26·5	141·55
9	20 27 40·27	24 27 16·0	80·88	9	22 23 52·41	15 20 17·2	142·45
10	20 30 12·45	24 19 10·7	82·50	10	22 26 10·19	15 6 2·5	143·35
11	20 32 44·37	24 10 55·7	84·12	11	22 28 27·68	14 51 42·4	144·22
12	20 35 16·03	24 2 31·0	85·70	12	22 30 44·88	14 37 17·1	145·07
13	20 37 47·43	23 53 56·8	87·28	13	22 33 1·80	14 22 46·7	145·92
14	20 40 18·56	23 45 13·1	88·85	14	22 35 18·44	14 8 11·2	146·73
15	20 42 49·42	23 36 20·0	90·40	15	22 37 34·81	13 53 30·8	147·53
16	20 45 20·00	23 27 17·6	91·95	16	22 39 50·90	13 38 45·6	148·32
17	20 47 50·30	23 18 5·9	93·47	17	22 42 6·72	13 23 55·7	149·08
18	20 50 20·32	23 8 45·1	95·00	18	22 44 22·28	13 9 1·2	149·83
19	20 52 50·05	22 59 15·1	96·50	19	22 46 37·57	12 54 2·2	150·56
20	20 55 19·49	22 49 36·1	97·98	20	22 48 52·60	12 38 58·7	151·28
21	20 57 48·64	22 39 48·2	99·47	21	22 51 7·38	12 23 51·0	152·00
22	21 0 17·50	22 29 51·4	100·93	22	22 53 21·90	12 8 39·0	152·67
23	21 2 46·06	22 19 45·8	102·38	23	22 55 36·17	11 53 23·0	153·35
24	21 5 14·31	S. 22 9 31·5		24	22 57 50·19	S. 11 38 2·9	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 13.		
	h m s	° ′ ″	″
0	22 57 50·19	S. 11 38 2·9	153·98
1	23 0 3·97	11 22 39·0	154·63
2	23 2 17·51	11 7 11·2	155·23
3	23 4 30·81	10 51 39·8	155·82
4	23 6 43·88	10 36 4·9	156·42
5	23 8 56·72	10 20 26·4	156·97
6	23 11 9·34	10 4 44·6	157·52
7	23 13 21·74	9 48 59·5	158·05
8	23 15 33·91	9 33 11·2	158·55
9	23 17 45·88	9 17 19·9	159·05
10	23 19 57·63	9 1 25·6	159·53
11	23 22 9·18	8 45 28·4	159·98
12	23 24 20·52	8 29 28·5	160·43
13	23 26 31·67	8 13 25·9	160·85
14	23 28 42·63	7 57 20·8	161·25
15	23 30 53·40	7 41 13·3	161·65
16	23 33 3·99	7 25 3·4	162·02
17	23 35 14·40	7 8 51·3	162·38
18	23 37 24·63	6 52 37·0	162·72
19	23 39 34·70	6 36 20·7	163·03
20	23 41 44·59	6 20 2·5	163·35
21	23 43 54·32	6 3 42·4	163·63
22	23 46 3·89	5 47 20·6	163·90
23	23 48 13·31	S. 5 30 57·2	164·15
	SATURDAY 14.		
0	23 50 22·58	S. 5 14 32·3	164·40
1	23 52 31·70	4 58 5·9	164·60
2	23 54 40·69	4 41 38·3	164·82
3	23 56 49·54	4 25 9·4	165·00
4	23 58 58·25	4 8 39·4	165·18
5	0 1 6·84	3 52 8·3	165·32
6	0 3 15·30	3 35 36·4	165·47
7	0 5 23·65	3 19 3·6	165·58
8	0 7 31·89	3 2 30·1	165·68
9	0 9 40·01	2 45 56·0	165·77
10	0 11 48·03	2 29 21·4	165·83
11	0 13 55·94	2 12 46·4	165·90
12	0 16 3·76	1 56 11·0	165·93
13	0 18 11·49	1 39 35·4	165·95
14	0 20 19·13	1 22 59·7	165·95
15	0 22 26·69	1 6 24·0	165·95
16	0 24 34·18	0 49 48·3	165·92
17	0 26 41·59	0 33 12·8	165·87
18	0 28 48·93	0 16 37·6	165·82
19	0 30 56·20	S. 0 0 2·7	165·73
20	0 33 3·42	N. 0 16 31·7	165·65
21	0 35 10·58	0 33 5·6	165·52
22	0 37 17·69	0 49 38·7	165·42
23	0 39 24·75	1 6 11·2	165·27
24	0 41 31·77	N. 1 22 42·8	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 15.		
	h m s	° ′ ″	″
0	0 41 31·77	N. 1 22 42·8	165·12
1	0 43 38·75	1 39 13·5	164·93
2	0 45 45·70	1 55 43·1	164·75
3	0 47 52·62	2 12 11·6	164·55
4	0 49 59·52	2 28 38·9	164·32
5	0 52 6·39	2 45 4·8	164·10
6	0 54 13·24	3 1 29·4	163·83
7	0 56 20·08	3 17 52·4	163·58
8	0 58 26·92	3 34 13·9	163·28
9	1 0 33·75	3 50 33·6	162·98
10	1 2 40·58	4 6 51·5	162·68
11	1 4 47·42	4 23 7·6	162·35
12	1 6 54·26	4 39 21·7	162·00
13	1 9 1·12	4 55 33·7	161·65
14	1 11 7·99	5 11 43·6	161·27
15	1 13 14·88	5 27 51·2	160·88
16	1 15 21·79	5 43 56·5	160·48
17	1 17 28·74	5 59 59·4	160·05
18	1 19 35·71	6 15 59·7	159·62
19	1 21 42·72	6 31 57·4	159·17
20	1 23 49·77	6 47 52·4	158·72
21	1 25 56·87	7 3 44·7	158·23
22	1 28 4·01	7 19 34·1	157·73
23	1 30 11·20	N. 7 35 20·5	157·22
	MONDAY 16.		
0	1 32 18·45	N. 7 51 3·8	156·70
1	1 34 25·75	8 6 44·0	156·17
2	1 36 33·12	8 22 21·0	155·62
3	1 38 40·55	8 37 54·7	155·03
4	1 40 48·06	8 53 24·9	154·47
5	1 42 55·63	9 8 51·7	153·88
6	1 45 3·28	9 24 15·0	153·25
7	1 47 11·01	9 39 34·5	152·65
8	1 49 18·82	9 54 50·4	152·00
9	1 51 26·72	10 10 2·4	151·35
10	1 53 34·70	10 25 10·5	150·68
11	1 55 42·78	10 40 14·6	150·02
12	1 57 50·95	10 55 14·7	149·32
13	1 59 59·22	11 10 10·6	148·62
14	2 2 7·59	11 25 2·3	147·90
15	2 4 16·06	11 39 49·7	147·17
16	2 6 24·65	11 54 32·7	146·42
17	2 8 33·34	12 9 11·2	145·65
18	2 10 42·14	12 23 45·1	144·90
19	2 12 51·06	12 38 14·5	144·10
20	2 15 0·09	12 52 39·1	143·30
21	2 17 9·24	13 6 58·9	142·48
22	2 19 18·52	13 21 13·8	141·67
23	2 21 27·92	13 35 23·8	140·83
24	2 23 37·44	N. 13 49 28·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 17.		
	h m s	° ′ ″	″
0	2 23 37·44	N.13 49 28·8	139·98
1	2 25 47·09	14 3 28·7	139·12
2	2 27 56·88	14 17 23·4	138·23
3	2 30 6·80	14 31 12·8	137·35
4	2 32 16·85	14 44 56·9	136·47
5	2 34 27·04	14 58 35·7	135·54
6	2 36 37·37	15 12 8·9	134·62
7	2 38 47·84	15 25 36·6	133·68
8	2 40 58·45	15 38 58·7	132·73
9	2 43 9·20	15 52 15·1	131·78
10	2 45 20·10	16 5 25·8	130·80
11	2 47 31·15	16 18 30·6	129·82
12	2 49 42·34	16 31 29·5	128·83
13	2 51 53·68	16 44 22·5	127·82
14	2 54 5·17	16 57 9·4	126·80
15	2 56 16·82	17 9 50·2	125·78
16	2 58 28·62	17 22 24·9	124·73
17	3 0 40·57	17 34 53·3	123·68
18	3 2 52·67	17 47 15·4	122·62
19	3 5 4·93	17 59 31·1	121·55
20	3 7 17·35	18 11 40·4	120·48
21	3 9 29·92	18 23 43·3	119·37
22	3 11 42·65	18 35 39·5	118·27
23	3 13 55·54	N.18 47 29·1	117·17
	WEDNESDAY 18.		
0	3 16 8·59	N.18 59 12·1	116·03
1	3 18 21·79	19 10 48·3	114·90
2	3 20 35·15	19 22 17·7	113·75
3	3 22 48·67	19 33 40·2	112·60
4	3 25 2·35	19 44 55·8	111·43
5	3 27 16·18	19 56 4·4	110·27
6	3 29 30·17	20 7 6·0	109·08
7	3 31 44·31	20 18 0·5	107·88
8	3 33 58·61	20 28 47·8	106·70
9	3 36 13·06	20 39 28·0	105·47
10	3 38 27·67	20 50 0·8	104·27
11	3 40 42·44	21 0 26·4	103·03
12	3 42 57·37	21 10 44·6	101·80
13	3 45 12·44	21 20 55·4	100·55
14	3 47 27·67	21 30 58·7	99·30
15	3 49 43·04	21 40 54·5	98·05
16	3 51 58·56	21 50 42·8	96·77
17	3 54 14·23	22 0 23·4	95·50
18	3 56 30·04	22 9 56·4	94·22
19	3 58 46·00	22 19 21·7	92·92
20	4 1 2·10	22 28 39·2	91·62
21	4 3 18·34	22 37 48·9	90·30
22	4 5 34·73	22 46 50·7	89·00
23	4 7 51·25	22 55 44·7	87·68
24	4 10 7·90	N.23 4 30·8	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 19.		
	h m s	° ′ ″	″
0	4 10 7·90	N.23 4 30·8	86·35
1	4 12 24·69	23 13 8·9	85·00
2	4 14 41·60	23 21 38·9	83·68
3	4 16 58·65	23 30 1·0	82·32
4	4 19 15·82	23 38 14·9	80·97
5	4 21 33·11	23 46 20·7	79·62
6	4 23 50·52	23 54 18·4	78·23
7	4 26 8·05	24 2 7·8	76·88
8	4 28 25·70	24 9 49·1	75·50
9	4 30 43·45	24 17 22·1	74·12
10	4 33 1·32	24 24 46·8	72·73
11	4 35 19·29	24 32 3·2	71·33
12	4 37 37·35	24 39 11·2	69·95
13	4 39 55·52	24 46 10·9	68·53
14	4 42 13·79	24 53 2·1	67·15
15	4 44 32·15	24 59 45·0	65·72
16	4 46 50·60	25 6 19·3	64·32
17	4 49 9·14	25 12 45·2	62·90
18	4 51 27·76	25 19 2·6	61·48
19	4 53 46·45	25 25 11·5	60·05
20	4 56 5·22	25 31 11·8	58·62
21	4 58 24·06	25 37 3·5	57·20
22	5 0 42·97	25 42 46·7	55·75
23	5 3 1·93	N.25 48 21·2	54·32
	FRIDAY 20.		
0	5 5 20·96	N.25 53 47·1	52·88
1	5 7 40·05	25 59 4·4	51·45
2	5 9 59·18	26 4 13·1	50·00
3	5 12 18·36	26 9 13·1	48·55
4	5 14 37·58	26 14 4·4	47·10
5	5 16 56·83	26 18 47·0	45·63
6	5 19 16·12	26 23 20·8	44·18
7	5 21 35·43	26 27 45·9	42·73
8	5 23 54·77	26 32 2·3	41·27
9	5 26 14·13	26 36 9·9	39·80
10	5 28 33·50	26 40 8·7	38·35
11	5 30 52·88	26 43 58·8	36·87
12	5 33 12·27	26 47 40·0	35·43
13	5 35 31·65	26 51 12·6	33·98
14	5 37 51·03	26 54 36·5	32·53
15	5 40 10·40	26 57 51·7	31·05
16	5 42 29·75	27 0 58·0	29·62
17	5 44 49·09	27 3 55·7	28·13
18	5 47 8·40	27 6 44·5	26·68
19	5 49 27·69	27 9 24·6	25·23
20	5 51 46·94	27 11 56·0	23·77
21	5 54 6·15	27 14 18·6	22·32
22	5 56 25·33	27 16 32·5	20·8
23	5 58 44·46	27 18 37·7	19·4
24	6 1 3·53	N.27 20 34·1	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 21.		
	h m s	° ′ ″	″
0	6 1 3·53	N.27 20 34·1	17·95
1	6 3 22·56	27 22 21·8	16·50
2	6 5 41·52	27 24 0·8	15·05
3	6 8 0·42	27 25 31·1	13·62
4	6 10 19·25	27 26 52·8	12·17
5	6 12 38·00	27 28 5·8	10·72
6	6 14 56·67	27 29 10·1	9·28
7	6 17 15·26	27 30 5·8	7·83
8	6 19 33·76	27 30 52·8	6·42
9	6 21 52·16	27 31 31·3	4·98
10	6 24 10·46	27 32 1·2	3·55
11	6 26 28·65	27 32 22·5	2·13
12	6 28 46·73	27 32 35·3	0·72
13	6 31 4·70	27 32 39·6	0·72
14	6 33 22·55	27 32 35·3	2·12
15	6 35 40·27	27 32 22·6	3·53
16	6 37 57·87	27 32 1·4	4·93
17	6 40 15·33	27 31 31·8	6·33
18	6 42 32·66	27 30 53·8	7·73
19	6 44 49·84	27 30 7·4	9·13
20	6 47 6·88	27 29 12·6	10·52
21	6 49 23·77	27 28 9·5	11·88
22	6 51 40·51	27 26 58·2	13·28
23	6 53 57·09	N.27 25 38·5	14·65
	SUNDAY 22.		
0	6 56 13·51	N.27 24 10·6	16·02
1	6 58 29·76	27 22 34·5	17·38
2	7 0 45·85	27 20 50·2	18·75
3	7 3 1·76	27 18 57·7	20·08
4	7 5 17·49	27 16 57·2	21·45
5	7 7 33·04	27 14 48·5	22·78
6	7 9 48·41	27 12 31·8	24·12
7	7 12 3·59	27 10 7·1	25·45
8	7 14 18·58	27 7 34·4	26·78
9	7 16 33·37	27 4 53·7	28·08
10	7 18 47·97	27 2 5·2	29·42
11	7 21 2·36	26 59 8·7	30·72
12	7 23 16·55	26 56 4·4	32·02
13	7 25 30·54	26 52 52·3	33·32
14	7 27 44·31	26 49 32·4	34·60
15	7 29 57·87	26 46 4·8	35·88
16	7 32 11·22	26 42 29·5	37·15
17	7 34 24·35	26 38 46·6	38·42
18	7 36 37·26	26 34 56·1	39·68
19	7 38 49·94	26 30 58·0	40·95
20	7 41 2·40	26 26 52·3	42·18
21	7 43 14·62	26 22 39·2	43·43
22	7	26 18 18·6	44·67
23			45·88
1			

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 23.		
	h m s	° ′ ″	″
0	7 49 49·91	N.26 9 15·3	47·12
1	7 52 1·20	26 4 32·6	48·32
2	7 54 12·25	25 59 42·7	49·53
3	7 56 23·06	25 54 45·5	50·72
4	7 58 33·63	25 49 41·2	51·92
5	8 0 43·95	25 44 29·7	53·10
6	8 2 54·02	25 39 11·1	54·28
7	8 5 3·84	25 33 45·4	55·43
8	8 7 13·42	25 28 12·8	56·60
9	8 9 22·74	25 22 33·2	57·77
10	8 11 31·82	25 16 46·6	58·90
11	8 13 40·64	25 10 53·2	60·05
12	8 15 49·20	25 4 52·9	61·17
13	8 17 57·51	24 58 45·9	62·30
14	8 20 5·57	24 52 32·1	63·42
15	8 22 13·37	24 46 11·6	64·52
16	8 24 20·91	24 39 44·5	65·63
17	8 26 28·19	24 33 10·7	66·70
18	8 28 35·22	24 26 30·5	67·80
19	8 30 41·98	24 19 43·7	68·88
20	8 32 48·49	24 12 50·4	69·95
21	8 34 54·74	24 5 50·7	71·02
22	8 37 0·73	23 58 44·6	72·05
23	8 39 6·46	N.23 51 32·3	73·12
	TUESDAY 24.		
0	8 41 11·93	N.23 44 13·6	74·15
1	8 43 17·14	23 36 48·7	75·18
2	8 45 22·09	23 29 17·6	76·20
3	8 47 26·79	23 21 40·4	77·22
4	8 49 31·22	23 13 57·1	78·23
5	8 51 35·40	23 6 7·7	79·23
6	8 53 39·32	22 58 12·3	80·22
7	8 55 42·99	22 50 11·0	81·20
8	8 57 46·39	22 42 3·8	82·18
9	8 59 49·55	22 33 50·7	83·15
10	9 1 52·45	22 25 31·8	84·12
11	9 3 55·09	22 17 7·1	85·07
12	9 5 57·48	22 8 36·7	86·02
13	9 7 59·62	22 0 0·6	86·95
14	9 10 1·51	21 51 18·9	87·87
15	9 12 3·15	21 42 31·7	88·82
16	9 14 4·54	21 33 38·8	89·72
17	9 16 5·69	21 24 40·5	90·62
18	9 18 6·58	21 15 36·8	91·53
19	9 20 7·23	21 6 27·6	92·42
20	9 22 7·64	20 57 13·1	93·30
21	9 24 7·81	20 47 53·3	94·18
22	9 26 7·74	20 38 28·2	95·03
23	9 28 7·44	20 28 58·0	95·92
24	9 30 6·90	N.20 19 22·5	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 25.		
	h m s	° ′ ″	″
0	9 30 6·90	N.20 19 22·5	96·77
1	9 32 6·12	20 9 41·9	97·60
2	9 34 5·11	19 59 56·3	98·45
3	9 36 3·87	19 50 5·6	99·28
4	9 38 2·40	19 40 9·9	100·12
5	9 40 0·70	19 30 9·2	100·92
6	9 41 58·78	19 20 3·7	101·73
7	9 43 56·64	19 9 53·3	102·53
8	9 45 54·28	18 59 38·1	103·32
9	9 47 51·70	18 49 18·2	104·12
10	9 49 48·90	18 38 53·5	104·90
11	9 51 45·89	18 28 24·1	105·67
12	9 53 42·66	18 17 50·1	106·43
13	9 55 39·23	18 7 11·5	107·18
14	9 57 35·60	17 56 28·4	107·95
15	9 59 31·76	17 45 40·7	108·68
16	10 1 27·72	17 34 48·6	109·42
17	10 3 23·48	17 23 52·1	110·15
18	10 5 19·05	17 12 51·2	110·87
19	10 7 14·42	17 1 46·0	111·57
20	10 9 9·61	16 50 36·6	112·30
21	10 11 4·61	16 39 22·8	112·98
22	10 12 59·42	16 28 4·9	113·68
23	10 14 54·05	N.16 16 42·8	114·37
	THURSDAY 26.		
0	10 16 48·50	N.16 5 16·6	115·05
1	10 18 42·78	15 53 46·3	115·70
2	10 20 36·88	15 42 12·1	116·38
3	10 22 30·81	15 30 33·8	117·03
4	10 24 24·58	15 18 51·6	117·68
5	10 26 18·18	15 7 5·5	118·33
6	10 28 11·63	14 55 15·5	118·95
7	10 30 4·91	14 43 21·8	119·60
8	10 31 58·04	14 31 24·2	120·20
9	10 33 51·02	14 19 23·0	120·83
10	10 35 43·85	14 7 18·0	121·42
11	10 37 36·54	13 55 9·5	122·03
12	10 39 29·09	13 42 57·3	122·62
13	10 41 21·50	13 30 41·6	123·20
14	10 43 13·78	13 18 22·4	123·78
15	10 45 5·93	13 5 59·7	124·37
16	10 46 57·95	12 53 33·5	124·92
17	10 48 49·84	12 41 4·0	125·47
18	10 50 41·62	12 28 31·2	126·03
19	10 52 33·27	12 15 55·0	126·57
20	10 54 24·81	12 3 15·6	127·12
21	10 56 16·25	11 50 32·9	127·63
22	10 58 7·57	11 37 47·1	128·15
23	10 59 58·79	11 24 58·2	128·68
24	11 1 49·91	N.11 12 6·1	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 27.		
	h m s	° ′ ″	″
0	11 1 49·91	N.11 12 6·1	129·18
1	11 3 40·93	10 59 11·0	129·68
2	11 5 31·87	10 46 12·9	130·18
3	11 7 22·71	10 33 11·8	130·67
4	11 9 13·47	10 20 7·8	131·15
5	11 11 4·15	10 7 0·9	131·63
6	11 12 54·75	9 53 51·1	132·08
7	11 14 45·28	9 40 38·6	132·55
8	11 16 35·73	9 27 23·3	132·98
9	11 18 26·13	9 14 5·4	133·45
10	11 20 16·46	9 0 44·7	133·87
11	11 22 6·73	8 47 21·5	134·32
12	11 23 56·95	8 33 55·6	134·73
13	11 25 47·12	8 20 27·2	135·13
14	11 27 37·25	8 6 56·4	135·55
15	11 29 27·34	7 53 23·1	135·95
16	11 31 17·38	7 39 47·4	136·35
17	11 33 7·39	7 26 9·3	136·73
18	11 34 57·38	7 12 28·9	137·10
19	11 36 47·33	6 58 46·3	137·48
20	11 38 37·26	6 45 1·4	137·85
21	11 40 27·17	6 31 14·3	138·20
22	11 42 17·07	6 17 25·1	138·55
23	11 44 6·96	N. 6 3 33·8	138·88
	SATURDAY 28.		
0	11 45 56·83	N. 5 49 40·5	139·22
1	11 47 46·70	5 35 45·2	139·55
2	11 49 36·58	5 21 47·9	139·88
3	11 51 26·46	5 7 48·6	140·17
4	11 53 16·35	4 53 47·6	140·48
5	11 55 6·26	4 39 44·7	140·78
6	11 56 56·18	4 25 40·0	141·07
7	11 58 46·12	4 11 33·6	141·35
8	12 0 36·09	3 57 25·5	141·62
9	12 2 26·10	3 43 15·8	141·88
10	12 4 16·13	3 29 4·5	142·13
11	12 6 6·21	3 14 51·7	142·38
12	12 7 56·33	3 0 37·4	142·62
13	12 9 46·49	2 46 21·7	142·87
14	12 11 36·71	2 32 4·5	143·08
15	12 13 26·99	2 17 46·0	143·28
16	12 15 17·32	2 3 26·3	143·50
17	12 17 7·72	1 49 5·3	143·70
18	12 18 58·19	1 34 43·1	143·88
19	12 20 48·73	1 20 19·8	144·07
20	12 22 39·35	1 5 55·4	144·25
21	12 24 30·05	0 51 29·9	144·40
22	12 26 20·83	0 37 3·5	144·55
23	12 28 11·70	0 22 36·1	144·7
24	12 30 2·68	N. 0 8 7·9	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 29.				*MONDAY* 30.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	12 30 2·68	N. 0 8 7·9	144·83	0	13 15 5·81	S. 5 41 8·6	145·30
1	12 31 53·75	S. 0 6 21·1	144·98	1	13 17 0·58	5 55 40·4	145·20
2	12 33 44·93	0 20 51·0	145·08	2	13 18 55·56	6 10 11·6	145·07
3	12 35 36·21	0 35 21·5	145·20	3	13 20 50·75	6 24 42·0	144·95
4	12 37 27·60	0 49 52·7	145·30	4	13 22 46·17	6 39 11·7	144·80
5	12 39 19·11	1 4 24·5	145·40	5	13 24 41·80	6 53 40·5	144·65
6	12 41 10·74	1 18 56·9	145·47	6	13 26 37·66	7 8 8·4	144·48
7	12 43 2·50	1 33 29·7	145·55	7	13 28 33·76	7 22 35·3	144·32
8	12 44 54·39	1 48 3·0	145·62	8	13 30 30·09	7 37 1·2	144·12
9	12 46 46·41	2 2 36·7	145·67	9	13 32 26·66	7 51 25·9	143·93
10	12 48 38·57	2 17 10·7	145·72	10	13 34 23·48	8 5 49·5	143·72
11	12 50 30·87	2 31 45·0	145·75	11	13 36 20·55	8 20 11·8	143·48
12	12 52 23·32	2 46 19·5	145·78	12	13 38 17·87	8 34 32·7	143·25
13	12 54 15·92	3 0 54·2	145·78	13	13 40 15·45	8 48 52·2	143·02
14	12 56 8·67	3 15 28·9	145·80	14	13 42 13·29	9 3 10·3	142·75
15	12 58 1·59	3 30 3·7	145·80	15	13 44 11·39	9 17 26·8	142·47
16	12 59 54·68	3 44 38·5	145·78	16	13 46 9·77	9 31 41·6	142·20
17	13 1 47·93	3 59 13·2	145·75	17	13 48 8·43	9 45 54·8	141·88
18	13 3 41·35	4 13 47·7	145·73	18	13 50 7·36	10 0 6·1	141·58
19	13 5 34·95	4 28 22·1	145·68	19	13 52 6·58	10 14 15·6	141·27
20	13 7 28·74	4 42 56·2	145·62	20	13 54 6·08	10 28 23·2	140·93
21	13 9 22·72	4 57 29·9	145·57	21	13 56 5·88	10 42 28·8	140·58
22	13 11 16·89	5 12 3·3	145·48	22	13 58 5·97	10 56 32·3	140·22
23	13 13 11·25	5 26 36·2	145·40	23	14 0 6·36	11 10 33·6	139·85
24	13 15 5·81	S. 5 41 8·6		24	14 2 7·05	S. 11 24 32·7	

PHASES OF THE MOON.

		d	h	m
○	Full Moon	2	2	28·4
☾	*Last Quarter*	9	9	36·1
●	New Moon	16	3	4·5
☽	*First Quarter*	23	17	57·0

		d	h
☾	Perigee	12	20
☾	Apogee	24	17

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Saturn W.	107 20 46	2922	108 52 37	2913	110 24 40	2904	111 56 54	2895
	Pollux W.	67 5 9	2883	68 37 50	2874	70 10 42	2865	71 43 46	2856
	Regulus W.	30 52 23	2931	32 24 3	2918	33 55 59	2905	35 28 11	2892
	Spica ♍ E.	23 56 50	2946	22 25 30	2947	20 54 11	2950	19 22 55	2955
	Antares E.	69 36 44	2884	68 4 5	2876	66 31 15	2867	64 58 14	2858
2	Pollux W.	79 32 6	2809	81 6 22	2800	82 40 50	2791	84 15 30	2781
	Regulus W.	43 13 3	2836	44 46 44	2825	46 20 40	2814	47 54 50	2804
	Antares E.	57 10 10	2812	55 35 58	2804	54 1 35	2794	52 26 59	2785
	α Aquilæ E.	104 50 30	3705	103 33 48	3684	102 16 44	3664	100 59 19	3646
3	Pollux W.	92 11 55	2735	93 47 49	2726	95 23 54	2717	97 0 12	2708
	Regulus W.	55 49 2	2753	57 24 32	2743	59 0 15	2733	60 36 11	2724
	Antares E.	44 31 3	2741	42 55 17	2732	41 19 20	2723	39 43 11	2715
	α Aquilæ E.	94 27 39	3571	93 8 33	3559	91 49 14	3548	90 29 43	3539
	Jupiter E.	120 15 8	2816	118 41 1	2807	117 6 42	2797	115 32 10	2787
4	Pollux W.	105 4 39	2663	106 42 9	2654	108 19 50	2646	109 57 43	2637
	Regulus W.	68 39 0	2677	70 16 11	2667	71 53 35	2659	73 31 10	2649
	Spica ♍ W.	14 52 47	2804	16 27 9	2771	18 2 15	2743	19 37 58	2719
	Antares E.	31 39 40	2675	30 2 27	2667	28 25 3	2660	26 47 30	2654
	α Aquilæ E.	83 49 58	3509	82 29 44	3507	81 9 27	3506	79 49 10	3506
	Jupiter E.	107 36 21	2740	106 0 34	2731	104 24 35	2722	102 48 24	2713
	Fomalhaut E.	113 45 55	2870	112 12 57	2856	110 39 41	2843	109 6 9	2830
5	Regulus W.	81 42 7	2607	83 20 53	2598	84 59 51	2589	86 39 1	2581
	Spica ♍ W.	27 43 10	2637	29 21 15	2624	30 59 37	2612	32 38 15	2600
	α Aquilæ E.	73 8 19	3530	71 48 28	3540	70 28 48	3551	69 9 20	3565
	Jupiter E.	94 44 29	2669	93 7 7	2660	91 29 33	2652	89 51 48	2643
	Fomalhaut E.	101 14 32	2773	99 39 29	2763	98 4 13	2753	96 28 44	2744
6	Regulus W.	94 57 40	2540	96 37 57	2532	98 18 25	2524	99 59 5	2517
	Spica ♍ W.	40 55 12	2549	42 35 17	2540	44 15 35	2530	45 56 6	2522
	α Aquilæ E.	62 36 39	3670	61 19 20	3699	60 2 32	3733	58 46 20	3770
	Jupiter E.	81 40 11	2601	80 1 17	2593	78 22 13	2585	76 42 58	2577
	Fomalhaut E.	88 28 19	2702	86 51 41	2694	85 14 53	2687	83 37 55	2680
	α Pegasi E.	108 12 24	2942	106 40 58	2927	105 9 13	2912	103 37 10	2898
	Sun E.	133 19 42	2863	131 46 36	2855	130 13 19	2845	128 39 49	2837
7	Spica ♍ W.	54 21 47	2478	56 3 31	2469	57 45 28	2461	59 27 36	2453
	α Aquilæ E.	52 36 29	4028	51 25 17	4099	50 15 14	4176	49 6 25	4263
	Jupiter E.	68 23 59	2538	66 43 39	2530	65 3 8	2523	63 22 27	2516
	Fomalhaut E.	75 30 59	2651	73 53 13	2646	72 15 21	2643	70 37 24	2639
	α Pegasi E.	95 52 50	2841	94 19 15	2832	92 45 28	2823	91 11 30	2815
	Sun E.	120 49 30	2792	119 14 52	2783	117 40 2	2775	116 5 1	2768
8	Spica ♍ W.	68 1 9	2412	69 44 26	2405	71 27 54	2396	73 11 34	2389
	Antares W.	22 8 2	2424	23 51 2	2414	25 34 16	2404	27 17 45	2394
	Jupiter E.	54 56 27	2480	53 14 46	2472	51 32 54	2466	49 50 53	2460
	Fomalhaut E.	62 26 39	2629	60 48 24	2629	59 10 9	2631	57 31 56	2633
	α Pegasi E.	83 19 14	2783	81 44 24	2779	80 9 29	2775	78 34 28	2773
	Sun E.	108 7 8	2724	106 31 0	2716	104 54 41	2707	103 18 11	2699
9	Spica ♍ W.	81 52 34	2352	83 37 18	2344	85 22 13	2337	87 7 19	2330

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Saturn W.	113 29 20	2886	115 1 57	2877	116 34 46	2868	118 7 46	2859
	Pollux W.	73 17 2	2846	74 50 30	2837	76 24 10	2828	77 58 2	2818
	Regulus W.	37 0 40	2881	38 33 23	2869	40 6 22	2858	41 39 35	2846
	Spica ♍ E.	17 51 46	2965	16 20 49	2980	14 50 11	3004	13 20 3	3041
	Antares E.	63 25 1	2848	61 51 36	2839	60 17 59	2831	58 44 11	2821
2	Pollux W.	85 50 23	2772	87 25 28	2763	89 0 45	2753	90 36 14	2744
	Regulus W.	49 29 13	2793	51 3 50	2782	52 38 41	2772	54 13 45	2763
	Antares E.	50 52 11	2776	49 17 12	2767	47 42 1	2758	46 6 38	2749
	α Aquilæ E.	99 41 34	3629	98 23 31	3612	97 5 10	3597	95 46 32	3583
3	Pollux W.	98 36 41	2699	100 13 23	2690	101 50 16	2681	103 27 22	2672
	Regulus W.	62 12 19	2714	63 48 41	2704	65 25 15	2695	67 2 1	2686
	Antares E.	38 6 51	2706	36 30 19	2698	34 53 37	2690	33 16 44	2682
	α Aquilæ E.	89 10 2	3530	87 50 11	3524	86 30 13	3517	85 10 8	3513
	Jupiter E.	113 57 25	2778	112 22 28	2768	110 47 18	2759	109 11 56	2749
4	Pollux W.	111 35 47	2629	113 14 3	2620	114 52 31	2612	116 31 10	2604
	Regulus W.	75 8 58	2641	76 46 57	2632	78 25 9	2623	80 3 32	2615
	Spica ♍ W.	21 14 12	2699	22 50 53	2681	24 27 58	2666	26 5 24	2651
	Antares E.	25 9 48	2648	23 31 58	2642	21 54 0	2637	20 15 56	2634
	α Aquilæ E.	78 28 52	3508	77 8 37	3511	75 48 25	3516	74 28 18	3523
	Jupiter E.	101 12 1	2704	99 35 26	2695	97 58 39	2686	96 21 40	2677
	Fomalhaut E.	107 32 20	2818	105 58 15	2806	104 23 55	2795	102 49 21	2784
5	Regulus W.	88 18 22	2572	89 57 55	2564	91 37 39	2556	93 17 34	2548
	Spica ♍ W.	34 17 10	2590	35 56 19	2579	37 35 43	2569	39 15 20	2559
	α Aquilæ E.	67 50 8	3581	66 31 13	3599	65 12 38	3621	63 54 26	3644
	Jupiter E.	88 13 51	2635	86 35 43	2626	84 57 23	2618	83 18 52	2610
	Fomalhaut E.	94 53 2	2735	93 17 9	2726	91 41 3	2717	90 4 46	2710
6	Regulus W.	101 39 54	2509	103 20 55	2501	105 2 7	2493	106 43 30	2486
	Spica ♍ W.	47 36 49	2512	49 17 45	2503	50 58 54	2495	52 40 14	2486
	α Aquilæ E.	57 30 47	3812	56 15 57	3858	55 1 54	3909	53 48 43	3965
	Jupiter E.	75 3 32	2569	73 23 55	2561	71 44 7	2553	70 4 8	2546
	Fomalhaut E.	82 0 49	2673	80 23 33	2667	78 46 9	2662	77 8 38	2656
	α Pegasi E.	102 4 49	2886	100 32 12	2873	98 59 19	2862	97 26 12	2851
	Sun E.	127 6 9	2827	125 32 16	2818	123 58 12	2810	122 23 57	2801
7	Spica ♍ W.	61 9 55	2444	62 52 27	2436	64 35 10	2429	66 18 4	2421
	α Aquilæ E.	47 58 58	4360	46 53 0	4467	45 48 39	4586	44 46 2	4721
	Jupiter E.	61 41 36	2508	60 0 34	2501	58 19 22	2494	56 38 0	2486
	Fomalhaut E.	68 59 22	2635	67 21 15	2633	65 43 5	2632	64 4 53	2630
	α Pegasi E.	89 37 21	2807	88 3 2	2800	86 28 34	2794	84 53 58	2788
	Sun E.	114 29 49	2757	112 54 25	2750	111 18 51	2741	109 43 5	2732
8	Spica ♍ W.	74 55 24	2382	76 39 25	2374	78 23 37	2366	80 8 0	2359
	Antares W.	29 1 28	2386	30 45 23	2376	32 29 32	2368	34 13 53	2360
	Jupiter E.	48 8 43	2453	46 26 23	2447	44 43 55	2441	43 1 19	2435
	Fomalhaut E.	55 53 46	2636	54 15 40	2640	52 37 40	2646	50 59 47	2654
	α Pegasi E.	76 59 25	2771	75 24 19	2769	73 49 11	2770	72 14 4	2770
	Sun E.	101 41 30	2691	100 4 38	2683	98 27 35	2675	96 50 21	2667
9	Spica ♍ W.	88 52 34	2323	90 38 0	2316	92 23 36	2310	94 9 21	2303

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.
		° ′ ″		° ′ ″		° ′ ″		° ′
9	Antares W.	35 58 25	2351	37 43 10	2344	39 28 6	2335	41 13 1
	Jupiter E.	41 18 34	2430	39 35 42	2424	37 52 42	2420	36 9 3
	Fomalhaut E.	49 22 6	2663	47 44 36	2674	46 7 21	2688	44 30 2
	α Pegasi E.	70 38 57	2772	69 3 53	2775	67 28 53	2779	65 53 5
	Sun E.	95 12 57	2659	93 35 22	2651	91 57 36	2643	90 19 4
10	Spica ♍ W.	95 55 16	2296	97 41 21	2290	99 27 35	2284	101 13 5
	Antares W.	50 1 34	2292	51 47 45	2285	53 34 6	2279	55 20 3
	Jupiter E.	27 32 56	2407	25 49 31	2410	24 6 10	2413	22 22 5
	Fomalhaut E.	36 32 39	2844	34 59 8	2889	33 26 35	2943	31 55 1
	α Pegasi E.	58 1 56	2838	56 28 17	2855	54 55 0	2874	53 22
	Sun E.	82 7 27	2599	80 28 30	2592	78 49 24	2585	77 10
11	Antares W.	64 15 24	2243	66 2 47	2239	67 50 17	2234	69 37 5
	α Pegasi E.	45 46 25	3067	44 17 35	3118	42 49 47	3175	41 23
	Sun E.	68 51 42	2548	67 11 36	2543	65 31 23	2538	63 51
12	Antares W.	78 37 38	2210	80 25 51	2207	82 14 8	2204	84 2 2
	α Aquilæ W.	43 3 26	4626	44 5 28	4464	45 9 52	4318	46 16 2
	Sun E.	55 27 46	2513	53 46 51	2510	52 5 51	2507	50 24 4
13	Antares W.	93 4 52	2196	94 53 25	2197	96 41 57	2198	98 30 2
	α Aquilæ W.	52 17 3	3705	53 33 45	3635	54 51 41	3572	56 10 4
	Sun E.	41 58 58	2500	40 17 45	2500	38 36 32	2501	36 55 2
18	Sun W.	23 49 17	2866	25 22 19	2883	26 55 0	2898	28 27 2
	Pollux E.	59 39 5	2534	57 58 39	2548	56 18 33	2564	54 38 4
	Regulus E.	96 7 28	2546	94 27 18	2560	92 47 28	2575	91 7 5
19	Sun W.	36 4 9	2994	37 34 29	3011	39 4 28	3026	40 34
	Pollux E.	46 25 26	2657	44 47 49	2673	43 10 33	2689	41 33 3
	Regulus E.	82 55 49	2668	81 18 26	2684	79 41 24	2699	78 4 4
20	Sun W.	47 57 27	3124	49 25 8	3138	50 52 31	3153	52 19 3
	Venus W.	17 34 31	3210	19 0 28	3226	20 26 6	3242	21 51 2
	Aldebaran W.	13 4 45	3603	14 23 16	3457	15 44 28	3352	17 7 4
	Pollux E.	33 34 14	2781	31 59 21	2797	30 24 49	2811	28 50 3
	Regulus E.	70 6 22	2791	68 31 42	2805	66 57 21	2820	65 23 1
21	Sun W.	59 30 34	3240	60 55 56	3253	62 21 2	3266	63 45 5
	Venus W.	28 53 41	3329	30 17 19	3343	31 40 41	3356	33 3 4
	Aldebaran W.	24 19 23	3110	25 47 20	3100	27 15 30	3091	28 43 5
	Saturn W.	17 48 8	3026	19 17 48	3024	20 47 31	3025	22 17 1
	Regulus E.	57 37 45	2903	56 5 30	2916	54 33 32	2930	53 1 5
	Spica ♍ E.	111 40 16	2895	110 7 51	2907	108 35 41	2919	107 3 4
22	Sun W.	70 46 36	3336	72 10 6	3346	73 33 24	3356	74 56 3
	Venus W.	39 55 50	3427	41 17 36	3438	42 39 10	3447	44 0 3
	Aldebaran W.	36 6 29	3083	37 35 0	3085	39 3 28	3087	40 31 5
	Saturn W.	29 44 35	3052	31 13 44	3059	32 42 44	3064	34 11 3
	Regulus E.	45 27 14	3001	43 57 2	3012	42 27 4	3023	40 57 2
	Spica ♍ E.	99 27 40	2983	97 57 6	2992	96 26 43	3001	94 56 3
23	Sun W.	81 49 40	3403	83 11 53	3409	84 33 59	3415	85 55 5
	Venus W.	50 45 1	3497	52 5 29	3503	53 25 50	3508	54 46

MEAN TIME.

LUNAR DISTANCES.

tar's Name and Position.		*Midnight.*	P.L. of diff.	XV^{h}.	P.L. of diff.	XVIII^{h}.	P.L. of diff.	XXI^{h}.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
tares	W.	42 58 32	2320	44 44 2	2313	46 29 42	2306	48 15 33	2299
piter	E.	34 26 24	2412	32 43 7	2410	30 59 46	2407	29 16 22	2406
malhaut	E.	42 53 50	2723	41 17 41	2746	39 42 2	2773	38 6 59	2806
egasi	E.	64 19 11	2792	62 44 33	2801	61 10 6	2811	59 35 53	2824
N	E.	88 41 33	2629	87 3 17	2621	85 24 50	2613	83 46 13	2607
ica ♍	W.	103 0 30	2272	104 47 11	2267	106 33 59	2261	108 20 56	2255
tares	W.	57 7 16	2266	58 54 5	2260	60 41 3	2255	62 28 9	2249
piter	E.	20 39 48	2431	18 56 58	2448	17 14 32	2472	15 32 39	2509
malhaut	E.	30 25 8	3085	28 56 40	3178	27 30 4	3291	26 5 42	3428
egasi	E.	51 49 44	2922	50 17 53	2952	48 46 40	2985	47 16 8	3024
N	E.	75 30 45	2572	73 51 12	2566	72 11 30	2560	70 31 40	2554
tares	W.	71 25 39	2225	73 13 30	2221	75 1 27	2217	76 49 30	2213
egasi	E.	39 57 47	3316	38 33 54	3404	37 11 42	3504	35 51 22	3620
N	E.	62 10 35	2528	60 30 1	2524	58 49 21	2520	57 8 36	2517
tares	W.	85 50 53	2200	87 39 20	2198	89 27 50	2198	91 16 21	2198
quilæ	W.	47 25 6	4070	48 35 37	3964	49 47 52	3869	51 1 43	3783
N	E.	48 43 42	2504	47 2 34	2502	45 21 23	2501	43 40 11	2500
tares	W.	100 18 58	2200	102 7 26	2202	103 55 51	2204	105 44 12	2207
quilæ	W.	57 30 54	3463	58 51 59	3417	60 13 56	3375	61 36 41	3338
N	E.	35 14 10	2504	33 33 3	2507	31 51 59	2510	30 10 59	2513
N	W.	29 59 2	2930	31 31 6	2946	33 2 27	2961	34 33 28	2977
lux	E.	52 59 26	2595	51 20 24	2611	49 41 44	2626	48 3 24	2642
gulus	E.	89 28 51	2606	87 50 4	2621	86 11 38	2637	84 33 33	2652
N	W.	42 3 27	3059	43 32 27	3076	45 1 6	3091	46 29 26	3107
lux	E.	39 57 5	2720	38 20 51	2735	36 44 58	2751	35 9 26	2766
gulus	E.	76 28 22	2730	74 52 22	2745	73 16 42	2760	71 41 22	2776
N	W.	53 46 22	3183	55 12 51	3198	56 39 2	3212	58 4 57	3227
nus	W.	23 16 27	3272	24 41 11	3287	26 5 38	3301	27 29 48	3316
lebaran	W.	18 32 19	3220	19 58 4	3180	21 24 37	3150	22 51 46	3127
lux	E.	27 16 42	2841	25 43 8	2856	24 9 53	2871	22 36 57	2886
gulus	E.	63 49 36	2849	62 16 11	2863	60 43 5	2876	59 10 16	2890
N	W.	65 10 29	3291	66 34 51	3303	67 58 59	3314	69 22 54	3325
nus	W.	34 26 40	3381	35 49 18	3394	37 11 42	3406	38 33 52	3416
lebaran	W.	30 12 18	3082	31 40 50	3081	33 9 23	3080	34 37 57	3082
urn	W.	23 46 53	3030	25 16 28	3035	26 45 57	3040	28 15 20	3047
gulus	E.	51 30 25	2954	49 59 15	2966	48 28 20	2977	46 57 39	2990
ica ♍	E.	105 32 5	2942	104 0 39	2952	102 29 26	2963	100 58 27	2973
N	W.	76 19 28	3373	77 42 15	3382	79 4 52	3390	80 27 20	3397
nus	W.	45 21 45	3465	46 42 48	3474	48 3 41	3482	49 24 25	3489
lebaran	W.	42 0 16	3093	43 28 34	3096	44 56 49	3099	46 25 0	3101
urn	W.	35 40 23	3077	37 9 1	3082	38 37 33	3088	40 5 57	3093
gulus	E.	39 27 48	3044	37 58 30	3053	36 29 23	3064	35 0 29	3074
ica ♍	E.	93 26 30	3017	91 56 38	3025	90 26 56	3032	88 57 23	3039
N	W.	87 17 51	3425	88 39 39	3430	90 1 22	3433	91 23 1	3437
nus	W.	56 6 14	3519	57 26 17	3523	58 46 16	3526	60 6 11	3530

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″
23	Aldebaran W.	47 53 8	3105	49 21 12	3108	50 49 12	3110	52 17 10
	Saturn W.	41 34 15	3098	43 2 27	3102	44 30 34	3107	45 58 35
	Regulus E.	33 31 47	3084	32 3 18	3093	30 35 0	3104	29 6 55
	Spica ♍ E.	87 27 58	3045	85 58 41	3051	84 29 31	3056	83 0 28
24	Sun W.	92 44 36	3439	94 6 9	3441	95 27 39	3442	96 49 8
	Venus W.	61 26 2	3533	62 45 50	3534	64 5 36	3535	65 25 21
	Aldebaran W.	59 36 22	3119	61 4 8	3120	62 31 53	3119	63 59 39
	Saturn W.	53 17 39	3124	54 45 19	3125	56 12 58	3127	57 40 35
	Pollux W.	15 15 3	3095	16 43 19	3092	18 11 38	3091	19 39 58
	Spica ♍ E.	75 36 31	3078	74 7 55	3081	72 39 22	3082	71 10 51
25	Sun W.	103 36 27	3440	104 57 58	3438	106 19 32	3436	107 41 8
	Venus W.	72 3 58	3534	73 23 45	3532	74 43 34	3529	76 3 26
	Aldebaran W.	71 18 40	3113	72 46 34	3110	74 14 32	3107	75 42 33
	Saturn W.	64 58 42	3123	66 26 24	3121	67 54 8	3118	69 21 56
	Pollux W.	27 2 16	3079	28 30 51	3076	29 59 30	3073	31 28 11
	Spica ♍ E.	63 48 24	3082	62 19 52	3081	60 51 19	3078	59 22 43
	Antares E.	109 40 21	3073	108 11 39	3071	106 42 54	3069	105 14 6
26	Sun W.	114 30 15	3409	115 52 21	3403	117 14 34	3397	118 36 54
	Aldebaran W.	83 3 51	3081	84 32 24	3075	86 1 4	3069	87 29 53
	Venus W.	82 43 51	3502	84 4 13	3497	85 24 41	3489	86 45 17
	Saturn W.	76 41 59	3093	78 10 17	3087	79 38 42	3082	81 7 14
	Pollux W.	38 53 0	3046	40 22 16	3041	41 51 38	3034	43 21 1
	Spica ♍ E.	51 58 50	3058	50 29 49	3053	49 0 42	3048	47 31 29
	Antares E.	97 49 3	3045	96 19 46	3039	94 50 22	3034	93 20 51
27	Sun W.	125 30 42	3349	126 53 57	3340	128 17 22	3331	129 40 58
	Venus W.	93 30 23	3441	94 51 53	3432	96 13 33	3422	97 35 25
	Saturn W.	88 32 0	3038	90 1 26	3030	91 31 2	3021	93 0 49
	Pollux W.	50 50 50	2989	52 21 16	2981	53 51 52	2973	55 22 39
	Regulus W.	15 1 57	3188	16 28 20	3147	17 55 33	3112	19 23 28
	Spica ♍ E.	40 3 37	3012	38 33 39	3005	37 3 33	2998	35 33 18
	Antares E.	85 51 8	2989	84 20 42	2982	82 50 7	2973	81 19 20
28	Venus W.	104 27 44	3357	105 50 50	3345	107 14 10	3332	108 37 44
	Saturn W.	100 32 43	2962	102 3 43	2951	103 34 57	2941	105 6 24
	Pollux W.	62 59 38	2913	64 31 41	2902	66 3 57	2891	67 36 27
	Regulus W.	26 50 41	2977	28 21 22	2960	29 52 25	2944	31 23 48
	Spica ♍ E.	27 59 57	2960	26 28 54	2954	24 57 44	2950	23 26 29
	Antares E.	73 42 27	2914	72 10 26	2904	70 38 12	2893	69 5 44
29	Saturn W.	112 47 16	2873	114 20 10	2861	115 53 19	2849	117 26 44
	Pollux W.	75 22 38	2822	76 56 37	2810	78 30 52	2797	80 5 24
	Regulus W.	39 5 34	2854	40 38 52	2841	42 12 27	2826	43 46 21
	Antares E.	61 19 46	2825	59 45 50	2813	58 11 39	2800	56 37 11
	α Aquilæ E.	108 11 17	3761	106 55 34	3734	105 39 23	3707	104 22 43
30	Pollux W.	88 2 0	2724	89 38 8	2711	91 14 33	2699	92 51 14
	Regulus W.	51 40 19	2744	53 16 0	2731	54 51 59	2718	56 28 15
	Antares E.	48 40 59	2728	47 4 56	2716	45 28 38	2704	43 52 4
	α Aquilæ E.	97 53 10	3575	96 34 8	3557	95 14 47	3540	93 55 7

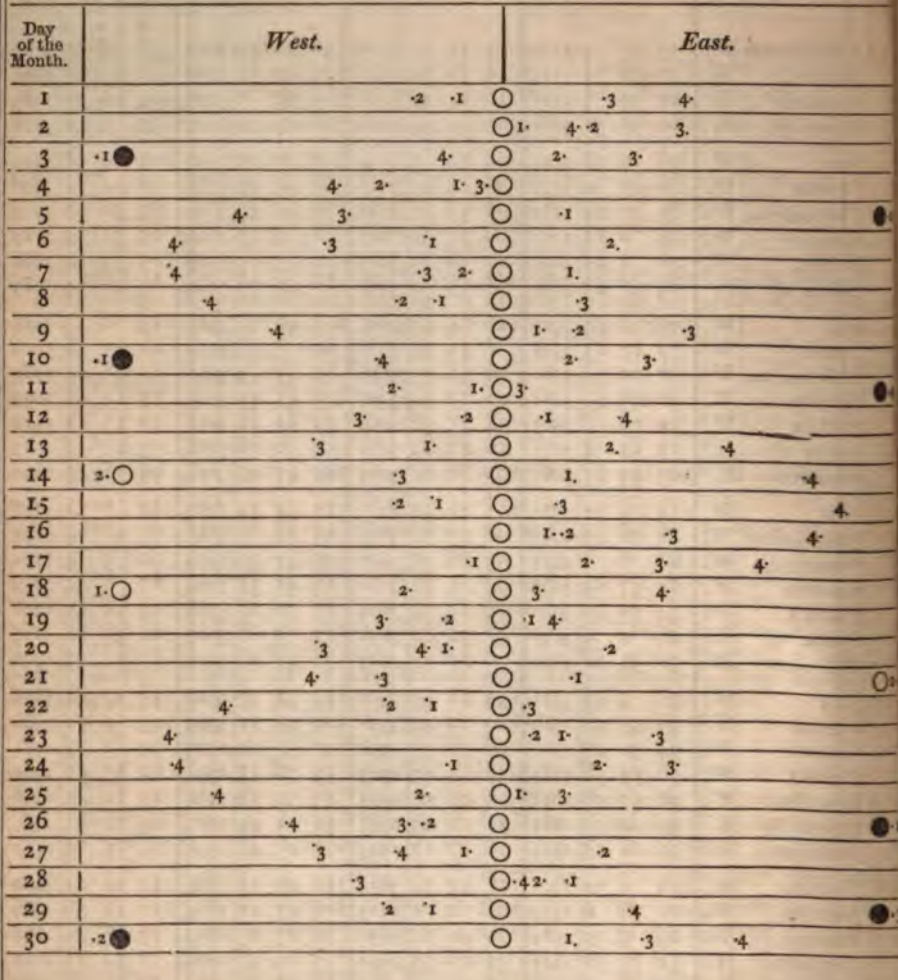
MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	Aldebaran W.	53 45 5	3114	55 12 57	3116	56 40 47	3118	58 8 35	3119
	Saturn W.	47 26 31	3114	48 54 24	3118	50 22 12	3120	51 49 57	3123
	Regulus E.	27 39 3	3125	26 11 24	3138	24 44 0	3150	23 16 51	3163
	Spica ♍ E.	81 31 31	3065	80 2 39	3069	78 33 52	3073	77 5 10	3076
24	Sun W.	98 10 36	3444	99 32 3	3444	100 53 30	3443	102 14 58	3442
	Venus W.	66 45 4	3537	68 4 47	3537	69 24 30	3536	70 44 14	3536
	Aldebaran W.	65 27 24	3119	66 55 11	3118	68 22 59	3117	69 50 48	3115
	Saturn W.	59 8 11	3127	60 35 48	3127	62 3 25	3126	63 31 3	3125
	Pollux W.	21 8 21	3087	22 36 46	3085	24 5 14	3083	25 33 44	3082
	Spica ♍ E.	69 42 21	3084	68 13 52	3084	66 45 23	3084	65 16 54	3083
25	Sun W.	109 2 48	3429	110 24 32	3424	111 46 21	3420	113 8 15	3415
	Venus W.	77 23 21	3522	78 43 21	3517	80 3 26	3513	81 23 36	3508
	Aldebaran W.	77 10 39	3100	78 38 49	3096	80 7 4	3091	81 35 25	3087
	Saturn W.	70 49 47	3112	72 17 42	3107	73 45 43	3104	75 13 48	3099
	Pollux W.	32 57 0	3065	34 25 52	3062	35 54 48	3056	37 23 51	3051
	Spica ♍ E.	57 54 4	3073	56 25 22	3070	54 56 36	3066	53 27 45	3063
	Antares E.	103 45 15	3063	102 16 20	3059	100 47 20	3054	99 18 14	3050
26	Sun W.	119 59 22	3382	121 21 59	3375	122 44 44	3367	124 7 38	3358
	Aldebaran W.	88 58 47	3056	90 27 51	3049	91 57 3	3041	93 26 25	3034
	Venus W.	88 6 1	3475	89 26 53	3467	90 47 54	3459	92 9 4	3451
	Saturn W.	82 35 53	3068	84 4 42	3062	85 33 38	3054	87 2 44	3046
	Pollux W.	44 50 47	3021	46 20 34	3014	47 50 29	3006	49 20 35	2998
	Spica ♍ E.	46 2 9	3037	44 32 42	3031	43 3 8	3025	41 33 26	3019
	Antares E.	91 51 12	3020	90 21 24	3013	88 51 28	3006	87 21 23	2998
27	Sun W.	131 4 46	3311	132 28 45	3300	133 52 57	3289	135 17 21	3278
	Venus W.	98 57 28	3401	100 19 44	3391	101 42 11	3379	103 4 51	3368
	Saturn W.	94 30 47	3002	96 0 57	2992	97 31 20	2982	99 1 55	2972
	Pollux W.	56 53 38	2954	58 24 49	2943	59 56 13	2934	61 27 49	2924
	Regulus W.	20 51 58	3058	22 20 59	3035	23 50 28	3014	25 20 23	2996
	Spica ♍ E.	34 2 55	2985	32 32 23	2977	31 1 42	2971	29 30 53	2965
	Antares E.	79 48 22	2954	78 17 12	2944	76 45 49	2935	75 14 14	2925
28	Venus W.	110 1 32	3308	111 25 34	3294	112 49 52	3282	114 14 24	3269
	Saturn W.	106 38 6	2919	108 10 1	2907	109 42 11	2895	111 14 36	2884
	Pollux W.	69 9 12	2869	70 42 11	2857	72 15 25	2845	73 48 54	2834
	Regulus W.	32 55 31	2913	34 27 33	2898	35 59 55	2884	37 32 35	2869
	Spica ♍ E.	21 55 10	2946	20 23 49	2947	18 52 30	2951	17 21 16	2960
	Antares E.	67 33 1	2871	66 0 5	2859	64 26 54	2847	62 53 27	2836
29	Saturn W.	119 0 24	2825	120 34 19	2813	122 8 30	2801	123 42 56	2789
	Pollux W.	81 40 11	2773	83 15 14	2761	84 50 33	2749	86 26 8	2736
	Regulus W.	45 20 33	2798	46 55 3	2785	48 29 51	2772	50 4 56	2758
	Antares E.	55 2 28	2777	53 27 30	2764	51 52 15	2753	50 16 45	2741
	α Aquilæ E.	103 5 37	3658	101 48 5	3635	100 30 9	3614	99 11 50	3595
30	Pollux W.	94 28 12	2675	96 5 26	2663	97 42 56	2650	99 20 43	2638
	Regulus W.	58 4 48	2692	59 41 39	2679	61 18 47	2666	62 56 12	2654
	Antares E.	42 15 13	2681	40 38 8	2669	39 0 46	2657	37 23 9	2646
	α Aquilæ	11	3510	91 14 58	3497	89 54 31	3485	88 33 50	3475

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 16h, MEAN TIME.



This Table represents, at 16h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals, 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shadow, of Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d.418488$.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s	Days.		
1	−1·2635	−0·6171	+6·6233	−0·8498	23 19 2·94	9	90	·246
2	1·2619	0·6517	7·4150	0·8497	23 15 7·03	10	91	·249
3	1·2601	0·6835	7·6803	0·8496	23 11 11·12	11	92	·252
4	−1·2582	−0·7131	+7·8445	−0·8494	23 7 15·22	12	93	·255
5	1·2562	0·7406	7·9643	0·8491	23 3 19·31	13	94	·257
6	1·2541	0·7664	8·0588	0·8489	22 59 23·40	14	95	·260
7	−1·2518	−0·7906	+8·1374	−0·8486	22 55 27·49	15	96	·263
8	1·2493	0·8134	8·2041	0·8483	22 51 31·58	16	97	·266
9	1·2468	0·8349	8·2625	0·8479	22 47 35·68	17	98	·268
10	−1·2441	−0·8553	+8·3141	−0·8475	22 43 39·77	18	99	·271
11	1·2412	0·8746	8·3606	0·8471	22 39 43·86	19	100	·274
12	1·2382	0·8930	8·4030	0·8467	22 35 47·95	20	101	·277
13	−1·2351	−0·9105	+8·4419	−0·8462	22 31 52·04	21	102	·279
14	1·2318	0·9271	8·4780	0·8457	22 27 56·13	22	103	·282
15	1·2283	0·9431	8·5116	0·8452	22 24 0·23	23	104	·285
16	−1·2247	−0·9583	+8·5429	−0·8446	22 20 4·32	24	105	·287
17	1·2209	0·9729	8·5726	0·8441	22 16 8·41	25	106	·290
18	1·2170	0·9869	8·6007	0·8435	22 12 12·50	26	107	·293
19	−1·2129	−1·0003	+8·6272	−0·8429	22 8 16·59	27	108	·296
20	1·2087	1·0132	8·6524	0·8422	22 4 20·68	28	109	·298
21	1·2043	1·0256	8·6765	0·8416	22 0 24·77	29	110	·301
22	−1·1997	−1·0375	+8·6996	−0·8409	21 56 28·86	30	111	·304
23	1·1950	1·0490	8·7217	0·8402	21 52 32·96	31	112	·307
24	1·1901	1·0601	8·7429	0·8395	21 48 37·05	32	113	·309
25	−1·1849	−1·0707	+8·7634	−0·8387	21 44 41·14	33	114	·312
26	1·1797	1·0810	8·7831	0·8380	21 40 45·23	34	115	·315
27	1·1742	1·0909	8·8022	0·8372	21 36 49·32	35	116	·318
28	−1·1685	−1·1004	+8·8207	−0·8365	21 32 53·41	36	117	·320
29	1·1626	1·1096	8·8385	0·8357	21 28 57·50	37	118	·323
30	1·1566	1·1185	8·8559	0·8349	21 25 1·59	38	119	·326
31	−1·1503	−1·1271	+8·8727	−0·8341	21 21 5·68	39	120	·329

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be subtracted from Apparent Time.*
		h m s	s	° ′ ″	″	m s	m s
Tues.	1	2 32 23·72	9·539	N.14 59 27·0	45·23	1 6·02	2 59·65
Wed.	2	2 36 12·65	9·562	15 17 32·4	44·60	1 6·10	3 7·26
Thur.	3	2 40 2·13	9·585	15 35 22·7	43·96	1 6·18	3 14·31
Frid.	4	2 43 52·17	9·609	15 52 57·7	43·31	1 6·26	3 20·81
Sat.	5	2 47 42·78	9·633	16 10 17·1	42·64	1 6·34	3 26·74
Sun.	6	2 51 33·97	9·657	16 27 20·5	41·97	1 6·42	3 32·10
Mon.	7	2 55 25·74	9·681	16 44 7·6	41·28	1 6·50	3 36·87
Tues.	8	2 59 18·09	9·706	17 0 38·2	40·58	1 6·58	3 41·07
Wed.	9	3 3 11·03	9·731	17 16 51·9	39·86	1 6·66	3 44·67
Thur.	10	3 7 4·57	9·756	17 32 48·5	39·13	1 6·75	3 47·68
Frid.	11	3 10 58·70	9·780	17 48 27·6	38·39	1 6·83	3 50·10
Sat.	12	3 14 53·43	9·805	18 3 49·0	37·64	1 6·91	3 51·92
Sun.	13	3 18 48·76	9·829	18 18 52·3	36·87	1 6·99	3 53·15
Mon.	14	3 22 44·66	9·854	18 33 37·2	36·09	1 7·07	3 53·80
Tues.	15	3 26 41·15	9·878	18 48 3·4	35·30	1 7·16	3 53·87
Wed.	16	3 30 38·22	9·902	19 2 10·6	34·50	1 7·24	3 53·36
Thur.	17	3 34 35·85	9·925	19 15 58·5	33·68	1 7·32	3 52·28
Frid.	18	3 38 34·05	9·948	19 29 26·9	32·85	1 7·40	3 50·65
Sat.	19	3 42 32·80	9·971	19 42 35·3	32·01	1 7·48	3 48·46
Sun.	20	3 46 32·10	9·993	19 55 23·6	31·16	1 7·55	3 45·73
Mon.	21	3 50 31·93	10·015	20 7 51·6	30·30	1 7·63	3 42·46
Tues.	22	3 54 32·29	10·036	20 19 58·8	29·43	1 7·71	3 38·67
Wed.	23	3 58 33·15	10·057	20 31 45·2	28·55	1 7·78	3 34·37
Thur.	24	4 2 34·52	10·078	20 43 10·3	27·66	1 7·86	3 29·57
Frid.	25	4 6 36·39	10·098	20 54 14·1	26·76	1 7·93	3 24·28
Sat.	26	4 10 38·75	10·118	21 4 56·3	25·85	1 8·00	3 18·50
Sun.	27	4 14 41·58	10·138	21 15 16·6	24·93	1 8·07	3 12·24
Mon.	28	4 18 44·88	10·157	21 25 15·0	24·01	1 8·14	3 5·52
Tues.	29	4 22 48·63	10·175	21 34 51·1	23·07	1 8·20	2 58·34
Wed.	30	4 26 52·84	10·193	21 44 4·8	22·13	1 8·26	2 50·72
Thur.	31	4 30 57·48	10·211	21 52 56·0	21·18	1 8·32	2 42·66
Frid.	32	4 35 2·55		N.22 1 24·4		1 8·38	2 34·18

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ˢ·18 from the *Sidereal*

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be added to Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Tues.	1	2 32 24·20	N.14 59 29·2	15 54·0	2 59·67	2 35 23·87
Wed.	2	2 36 13·15	15 17 34·7	15 53·8	3 7·28	2 39 20·43
Thur.	3	2 40 2·65	15 35 25·1	15 53·6	3 14·33	2 43 15·98
Frid.	4	2 43 52·71	15 53 0·1	15 53·4	3 20·83	2 47 13·54
Sat.	5	2 47 43·34	16 10 19·5	15 53·1	3 26·75	2 51 10·09
Sun.	6	2 51 34·54	16 27 23·0	15 52·9	3 32·11	2 55 6·65
Mon.	7	2 55 26·32	16 44 10·1	15 52·7	3 36·88	2 59 3·20
Tues.	8	2 59 18·68	17 0 40·7	15 52·5	3 41·08	3 2 59·76
Wed.	9	3 3 11·64	17 16 54·4	15 52·2	3 44·68	3 6 56·32
Thur.	10	3 7 5·19	17 32 51·0	15 52·0	3 47·69	3 10 52·87
Frid.	11	3 10 59·33	17 48 30·1	15 51·8	3 50·10	3 14 49·43
Sat.	12	3 14 54·07	18 3 51·4	15 51·6	3 51·92	3 18 45·99
Sun.	13	3 18 49·39	18 18 54·7	15 51·4	3 53·15	3 22 42·54
Mon.	14	3 22 45·30	18 33 39·5	15 51·2	3 53·80	3 26 39·10
Tues.	15	3 26 41·79	18 48 5·7	15 50·9	3 53·87	3 30 35·66
Wed.	16	3 30 38·86	19 2 12·9	15 50·8	3 53·36	3 34 32·21
Thur.	17	3 34 36·49	19 16 0·7	15 50·6	3 52·28	3 38 28·77
Frid.	18	3 38 34·69	19 29 29·0	15 50·4	3 50·64	3 42 25·33
Sat.	19	3 42 33·43	19 42 37·4	15 50·2	3 48·45	3 46 21·88
Sun.	20	3 46 32·72	19 55 25·6	15 50·0	3 45·72	3 50 18·44
Mon.	21	3 50 32·55	20 7 53·4	15 49·8	3 42·45	3 54 15·00
Tues.	22	3 54 32·90	20 20 0·6	15 49·7	3 38·66	3 58 11·56
Wed.	23	3 58 33·75	20 31 46·9	15 49·5	3 34·36	4 2 8·11
Thur.	24	4 2 35·11	20 43 11·9	15 49·4	3 29·56	4 6 4·67
Frid.	25	4 6 36·96	20 54 15·6	15 49·2	3 24·27	4 10 1·23
Sat.	26	4 10 39·30	21 4 57·7	15 49·1	3 18·49	4 13 57·79
Sun.	27	4 14 42·12	21 15 18·0	15 48·9	3 12·23	4 17 54·35
Mon.	28	4 18 45·40	21 25 16·2	15 48·8	3 5·50	4 21 50·90
Tues.	29	4 22 49·14	21 34 52·2	15 48·6	2 58·32	4 25 47·46
Wed.	30	4 26 53·32	21 44 5·9	15 48·5	2 50·70	4 29 44·02
Thur.	31	4 30 57·94	21 52 57·0	15 48·3	2 42·64	4 33 40·58
Frid.	32	4 35 2·98	N.22 1 25·3	15 48·2	2 34·16	4 37 37·14

* The Semidiameter for *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax. *Noon.*	THE MOON'S Horizontal Parallax. *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	40 31 23·6	N.0·05	0·0035252	15 29·8	15 34·6	56 45·4	57 2·9
2	41 29 31·9	S.0·09	0·0036325	15 39·2	15 43·7	57 20·1	57 36·6
3	42 27 38·5	0·21	0·0037391	15 48·0	15 51·9	57 52·2	58 6·6
4	43 25 43·5	0·33	0·0038452	15 55·6	15 58·8	58 19·8	58 31·7
5	44 23 47·1	0·43	0·0039508	16 1·7	16 4·1	58 42·2	58 51·2
6	45 21 49·3	0·50	0·0040557	16 6·2	16 7·9	58 58·7	59 4·9
7	46 19 50·0	0·55	0·0041595	16 9·2	16 10·1	59 9·8	59 13·3
8	47 17 49·4	0·58	0·0042623	16 10·8	16 11·1	59 15·7	59 16·9
9	48 15 47·5	0·57	0·0043639	16 11·2	16 10·9	59 17·1	59 16·0
10	49 13 44·3	0·53	0·0044641	16 10·3	16 9·3	59 13·7	59 10·1
11	50 11 39·9	0·46	0·0045627	16 7·9	16 6·2	59 5·2	58 58·9
12	51 9 34·2	0·36	0·0046596	16 4·1	16 1·5	58 51·1	58 41·7
13	52 7 27·2	0·25	0·0047547	15 58·5	15 55·1	58 30·7	58 18·3
14	53 5 18·8	S.0·13	0·0048480	15 51·4	15 47·2	58 4·5	57 49·3
15	54 3 9·1	N.0·03	0·0049393	15 42·8	15 38·1	57 33·0	57 15·7
16	55 0 58·0	0·16	0·0050286	15 33·2	15 28·2	56 57·9	56 39·6
17	55 58 45·5	0·29	0·0051156	15 23·2	15 18·2	56 21·2	56 3·1
18	56 56 31·5	0·41	0·0052006	15 13·4	15 8·9	55 45·5	55 28·8
19	57 54 16·1	0·50	0·0052836	15 4·6	15 0·7	55 13·3	54 59·0
20	58 51 59·1	0·58	0·0053646	14 57·3	14 54·4	54 46·5	54 36·0
21	59 49 40·7	0·62	0·0054437	14 52·1	14 50·4	54 27·6	54 21·3
22	60 47 20·8	0·64	0·0055209	14 49·4	14 49·0	54 17·5	54 16·2
23	61 44 59·3	0·63	0·0055963	14 49·4	14 50·5	54 17·5	54 21·4
24	62 42 36·2	0·58	0·0056701	14 52·2	14 54·6	54 27·8	54 36·8
25	63 40 11·7	0·51	0·0057423	14 57·7	15 1·5	54 48·1	55 1·8
26	64 37 45·8	0·41	0·0058130	15 5·8	15 10·6	55 17·5	55 35·1
27	65 35 18·5	0·29	0·0058823	15 15·8	15 21·5	55 54·4	56 15·0
28	66 32 49·8	0·17	0·0059503	15 27·4	15 33·4	56 36·6	56 58·7
29	67 30 19·8	N.0·04	0·0060172	15 39·5	15 45·5	57 20·9	57 43·0
30	68 27 48·6	S.0·10	0·0060830	15 51·4	15 56·9	58 4·4	58 24·7
31	69 25 16·4	0·21	0·0061475	16 2·0	16 6·6	58 43·4	59 0·2
32	70 22 43·2	S.0·32	0·0062108	16 10·6	16 13·9	59 14·9	

MEAN TIME.

Day of the Week.	Day of the Month.	THE MOON'S Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Tues.	1	212 23 6·4	218 56 32·0	N. 0 57 40·2	N. 0 21 38·3	14·9	11 49·0
Wed.	2	225 34 3·0	232 15 32·0	S. 0 15 3·6	S. 0 51 55·0	15·9	12 38·4
Thur.	3	239 0 48·7	245 49 39·5	1 28 24·0	2 3 56·1	16·9	13 32·3
Frid.	4	252 41 49·0	259 36 59·4	2 37 57·8	3 9 55·4	17·9	14 30·5
Sat.	5	266 34 51·6	273 35 5·3	3 39 16·0	4 5 29·7	18·9	15 31·7
Sun.	6	280 37 19·5	287 41 13·3	4 28 8·7	4 46 48·7	19·9	16 33·6
Mon.	7	294 46 25·3	301 52 35·1	5 1 9·9	5 10 56·7	20·9	17 33·7
Tues.	8	308 59 22·2	316 6 27·3	5 15 58·8	5 16 10·2	21·9	18 30·5
Wed.	9	323 13 30·9	330 20 13·9	5 11 30·8	5 2 5·3	22·9	19 23·5
Thur.	10	337 26 18·2	344 31 25·4	4 48 3·2	4 29 39·2	23·9	20 13·4
Frid.	11	351 35 16·8	358 37 34·1	4 7 12·6	3 41 6·7	24·9	21 1·3
Sat.	12	5 37 58·6	12 36 12·3	3 11 47·9	2 39 46·7	25·9	21 48·4
Sun.	13	19 31 57·0	26 24 55·4	2 5 35·5	1 29 47·9	26·9	22 35·9
Mon.	14	33 14 50·8	40 1 27·8	S. 0 52 58·9	S. 0 15 43·2	27·9	23 24·9
Tues.	15	46 44 32·8	53 23 54·3	N. 0 21 25·9	N. 0 57 55·6	28·9	♂
Wed.	16	59 59 23·2	66 30 52·7	1 33 16·4	2 7 1·1	0·4	0 15·8
Thur.	17	72 58 20·3	79 21 46·3	2 38 45·8	3 8 9·2	1·4	1 8·7
Frid.	18	85 41 14·6	91 56 53·3	3 34 54·3	3 58 46·8	2·4	2 2·7
Sat.	19	98 8 54·0	104 17 31·9	4 19 35·7	4 37 12·4	3·4	2 56·6
Sun.	20	110 23 6·0	116 25 58·4	4 51 31·2	5 2 28·1	4·4	3 49·1
Mon.	21	122 26 34·5	128 25 21·4	5 10 0·9	5 14 9·0	5·4	4 38·9
Tues.	22	134 22 49·4	140 19 30·2	5 14 52·8	5 12 13·8	6·4	5 25·8
Wed.	23	146 15 56·9	152 12 43·9	5 6 14·7	4 56 58·3	7·4	6 10·0
Thur.	24	158 10 26·3	164 9 39·2	4 44 28·6	4 28 50·5	8·4	6 52·0
Frid.	25	170 10 57·9	176 14 56·5	4 10 9·3	3 48 32·7	9·4	7 33·0
Sat.	26	182 22 7·8	188 33 3·4	3 24 8·7	2 57 8·0	10·4	8 13·8
Sun.	27	194 48 11·5	201 7 57·5	2 27 42·6	1 56 8·0	11·4	8 55·8
Mon.	28	207 32 42·4	214 2 43·0	1 22 41·9	N. 0 47 45·4	12·4	9 40·1
Tues.	29	220 38 9·9	227 19 7·9	N. 0 11 43·0	S. 0 24 57·7	13·4	10 28·0
Wed.	30	234 5 34·8	240 57 21·4	S. 1 1 45·3	1 38 6 8	14·4	11 20·7
Thur.	31	247 54 11·3	254 55 41·3	2 13 25·8	2 47 5·7	15·4	12 18·3
Frid.	32	262 1 20·6	269 10 33·3	S. 3 18 29·2	S. 3 47 0·9	16·4	13 20·1

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 1.				*THURSDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	14 2 7·05	S. 11 24 32·7	139·47	0	15 45 46·57	S. 21 23 36·1	103·43
1	14 4 8·05	11 38 29·5	139·05	1	15 48 6·06	21 33 56·7	102·30
2	14 6 9·37	11 52 23·8	138·65	2	15 50 25·97	21 44 10·5	101·13
3	14 8 11·00	12 6 15·7	138·22	3	15 52 46·31	21 54 17·3	99·95
4	14 10 12·95	12 20 5·0	137·78	4	15 55 7·08	22 4 17·0	98·77
5	14 12 15·23	12 33 51·7	137·32	5	15 57 28·27	22 14 9·6	97·57
6	14 14 17·84	12 47 35·6	136·85	6	15 59 49·88	22 23 55·0	96·32
7	14 16 20·77	13 1 16·7	136·37	7	16 2 11·91	22 33 32·9	95·08
8	14 18 24·04	13 14 54·9	135·87	8	16 4 34·37	22 43 3·4	93·83
9	14 20 27·65	13 28 30·1	135·37	9	16 6 57·24	22 52 26·4	92·57
10	14 22 31·61	13 42 2·3	134·83	10	16 9 20·53	23 1 41·8	91·27
11	14 24 35·92	13 55 31·3	134·30	11	16 11 44·23	23 10 49·4	89·95
12	14 26 40·57	14 8 57·1	133·75	12	16 14 8·34	23 19 49·1	88·63
13	14 28 45·58	14 22 19·6	133·17	13	16 16 32·87	23 28 40·9	87·30
14	14 30 50·94	14 35 38·6	132·58	14	16 18 57·81	23 37 24·7	85·95
15	14 32 56·67	14 48 54·1	132·00	15	16 21 23·16	23 46 0·4	84·57
16	14 35 2·77	15 2 6·1	131·38	16	16 23 48·91	23 54 27·8	83·20
17	14 37 9·23	15 15 14·4	130·75	17	16 26 15·06	24 2 47·0	81·78
18	14 39 16·06	15 28 18·9	130·10	18	16 28 41·61	24 10 57·7	80·37
19	14 41 23·27	15 41 19·5	129·45	19	16 31 8·56	24 18 59·9	78·93
20	14 43 30·86	15 54 16·2	128·77	20	16 33 35·89	24 26 53·5	77·50
21	14 45 38·82	16 7 8·8	128·08	21	16 36 3·61	24 34 38·5	76·03
22	14 47 47·17	16 19 57·3	127·38	22	16 38 31·72	24 42 14·7	74·55
23	14 49 55·91	S. 16 32 41·6	126·67	23	16 41 0·21	S. 24 49 42·0	73·07
	WEDNESDAY 2.				*FRIDAY* 4.		
0	14 52 5·04	S. 16 45 21·6	125·93	0	16 43 29·07	S. 24 57 0·4	71·57
1	14 54 14·56	16 57 57·2	125·17	1	16 45 58·31	25 4 9·8	70·03
2	14 56 24·48	17 10 28·2	124·40	2	16 48 27·91	25 11 10·0	68·50
3	14 58 34·79	17 22 54·6	123·63	3	16 50 57·88	25 18 1·0	66·95
4	15 0 45·50	17 35 16·4	122·82	4	16 53 28·20	25 24 42·7	65·40
5	15 2 56·61	17 47 33·3	122·02	5	16 55 58·88	25 31 15·1	63·82
6	15 5 8·13	17 59 45·4	121·18	6	16 58 29·90	25 37 38·0	62·23
7	15 7 20·05	18 11 52·5	120·33	7	17 1 1·26	25 43 51·4	60·62
8	15 9 32·39	18 23 54·5	119·47	8	17 3 32·95	25 49 55·1	59·00
9	15 11 45·13	18 35 51·3	118·60	9	17 6 4·98	25 55 49·1	57·38
10	15 13 58·28	18 47 42·9	117·70	10	17 8 37·32	26 1 33·4	55·75
11	15 16 11·85	18 59 29·1	116·78	11	17 11 9·98	26 7 7·9	54·08
12	15 18 25·84	19 11 9·8	115·87	12	17 13 42·95	26 12 32·4	52·42
13	15 20 40·25	19 22 45·0	114·92	13	17 16 16·23	26 17 46·9	50·75
14	15 22 55·07	19 34 14·5	113·95	14	17 18 49·81	26 22 51·4	49·05
15	15 25 10·32	19 45 38·2	112·98	15	17 21 23·67	26 27 45·7	47·35
16	15 27 25·98	19 56 56·1	111·98	16	17 23 57·82	26 32 29·8	45·65
17	15 29 42·07	20 8 8·0	110·98	17	17 26 32·24	26 37 3·7	43·92
18	15 31 58·58	20 19 13·9	109·95	18	17 29 6·93	26 41 27·2	42·20
19	15 34 15·52	20 30 13·6	108·90	19	17 31 41·88	26 45 40·4	40·45
20	15 36 32·88	20 41 7·0	107·83	20	17 34 17·08	26 49 43·1	38·70
21	15 38 50·66	20 51 54·0	106·78	21	[illegible]	[illegible]	36·93
22	15 41 8·87	21 2 34·7	105·67	22	[illegible]	[illegible]	35·18
23	15 43 27·51	21 13 8·7	104·57	23	[illegible]	[illegible]	[illegible]
24	15 45 46·57	S. 21 23 36·1		24	[illegible]	[illegible]	[illegible]

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 5.				*MONDAY* 7.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	17 44 40·23	S. 27 4 8·4	31·62	0	19 50 49·39	S. 26 7 33·6	56·63
1	17 47 16·57	27 7 18·1	29·82	1	19 53 24·83	26 1 53·8	58·37
2	17 49 53·11	27 10 17·0	28·02	2	19 56 0·03	25 56 3·6	60·10
3	17 52 29·84	27 13 5·1	26·22	3	19 58 34·99	25 50 3·0	61·82
4	17 55 6·76	27 15 42·4	24·40	4	20 1 9·71	25 43 52·1	63·52
5	17 57 43·85	27 18 8·8	22·57	5	20 3 44·17	25 37 31·0	65·22
6	18 0 21·11	27 20 24·2	20·75	6	20 6 18·38	25 30 59·7	66·90
7	18 2 58·53	27 22 28·7	18·90	7	20 8 52·32	25 24 18·3	68·57
8	18 5 36·09	27 24 22·1	17·07	8	20 11 25·98	25 17 26·9	70·25
9	18 8 13·80	27 26 4·5	15·23	9	20 13 59·37	25 10 25·4	71·88
10	18 10 51·63	27 27 35·9	13·38	10	20 16 32·48	25 3 14·1	73·53
11	18 13 29·58	27 28 56·2	11·52	11	20 19 5·30	24 55 52·9	75·15
12	18 16 7·65	27 30 5·3	9·67	12	20 21 37·82	24 48 22·0	76·77
13	18 18 45·82	27 31 3·3	7·80	13	20 24 10·05	24 40 41·4	78·37
14	18 21 24·07	27 31 50·1	5·93	14	20 26 41·97	24 32 51·2	79·95
15	18 24 2·40	27 32 25·7	4·05	15	20 29 13·59	24 24 51·5	81·53
16	18 26 40·80	27 32 50·0	2·20	16	20 31 44·90	24 16 42·3	83·10
17	18 29 19·27	27 33 3·2	0·32	17	20 34 15·89	24 8 23·7	84·65
18	18 31 57·79	27 33 5·1	1·55	18	20 36 46·57	23 59 55·8	86·18
19	18 34 36·34	27 32 55·8	3·42	19	20 39 16·92	23 51 18·7	87·70
20	18 37 14·93	27 32 35·3	5·32	20	20 41 46·94	23 42 32·5	89·22
21	18 39 53·54	27 32 3·4	7·18	21	20 44 16·63	23 33 37·2	90·70
22	18 42 32·16	27 31 20·3	9·05	22	20 46 45·99	23 24 33·0	92·20
23	18 45 10·79	S. 27 30 26·0	10·93	23	20 49 15·02	S. 23 15 19·8	93·65
	SUNDAY 6.				*TUESDAY* 8.		
0	18 47 49·41	S. 27 29 20·4	12·82	0	20 51 43·71	S. 23 5 5[illegible]·9	95·12
1	18 50 28·01	27 28 3·5	14·68	1	20 54 12·06	22 56 27·2	96·55
2	18 53 6·58	27 26 35·4	16·57	2	20 56 40·06	22 46 47·9	97·97
3	18 55 45·12	27 24 56·0	18·43	3	20 59 7·72	22 37 0·1	99·37
4	18 58 23·60	27 23 5·4	20·30	4	21 1 35·03	22 27 3·9	100·78
5	19 1 2·03	27 21 3·6	22·17	5	21 4 1·99	22 16 59·2	102·15
6	19 3 40·40	27 18 50·6	24·02	6	21 6 28·60	22 6 46·3	103·50
7	19 6 18·68	27 16 26·5	25·90	7	21 8 54·86	21 56 25·3	104·87
8	19 8 56·89	27 13 51·1	27·73	8	21 11 20·76	21 45 56·1	106·18
9	19 11 35·00	27 11 4·7	29·60	9	21 13 46·31	21 35 19·0	107·52
10	19 14 13·01	27 8 7·1	31·45	10	21 16 11·51	21 24 33·9	108·80
11	19 16 50·90	27 4 58·4	33·28	11	21 18 36·35	21 13 41·1	110·10
12	19 19 28·68	27 1 38·7	35·12	12	21 21 0·83	21 2 40·5	111·37
13	19 22 6·32	26 58 8·0	36·97	13	21 23 24·96	20 51 32·3	112·62
14	19 24 43·82	26 54 26·2	38·77	14	21 25 48·73	20 40 16·6	113·85
15	19 27 21·18	26 50 33·6	40·60	15	21 28 12·14	20 28 53·5	115·07
16	19 29 58·38	26 46 30·0	42·42	16	21 30 35·19	20 17 23·1	116·28
17	19 32 35·42	26 42 15·5	44·22	17	21 32 57·89	20 5 45·4	117·47
18	19 35 12·28	26 37 50·2	46·02	18	21 35 20·23	19 54 0·6	118·65
19	19 37 48·96	26 33 14·1	47·80	19	21 37 42·22	19 42 8·7	119·80
20	19 40 25·45	26 28 27·3	49·58	20	21 40 3·85	19 30 9·9	120·95
21	19 43 1·75	26 23 29·8	51·35	21	21 42 25·13	19 18 4·2	122·07
22	19 45 37·85	26 18 21·7	53·13	22	21 44 46·06	19 5 51·8	123·17
23	19 48 13·73	26 13 2·9	54·88	23	21 47 6·63	18 53 32·8	124·28
24	19 50 49·39	S. 26 7 33·6		24	21 49 26·85	S. 18 41 7·1	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 9.				*FRIDAY* 11.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	21 49 26·85	S. 18 41 7·1	125·35	0	23 35 38·74	S. 7 7 22·5	158·35
1	21 51 46·72	18 28 35·0	126·42	1	23 37 45·53	6 51 32·3	158·68
2	21 54 6·25	18 15 56·5	127·45	2	23 39 52·16	6 35 40·3	158·95
3	21 56 25·43	18 3 11·8	128·48	3	23 41 58·63	6 19 46·6	159·25
4	21 58 44·26	17 50 20·9	129·50	4	23 44 4·93	6 3 51·1	159·50
5	22 1 2·75	17 37 23·9	130·50	5	23 46 11·07	5 47 54·1	159·77
6	22 3 20·91	17 24 20·9	131·48	6	23 48 17·07	5 31 55·5	160·00
7	22 5 38·73	17 11 12·0	132·43	7	23 50 22·93	5 15 55·5	160·22
8	22 7 56·21	16 57 57·4	133·40	8	23 52 28·64	4 59 54·2	160·42
9	22 10 13·36	16 44 37·0	134·32	9	23 54 34·21	4 43 51·7	160·62
10	22 12 30·18	16 31 11·1	135·23	10	23 56 39·65	4 27 48·0	160·80
11	22 14 46·67	16 17 39·7	136·15	11	23 58 44·97	4 11 43·2	160·95
12	22 17 2·84	16 4 2·8	137·02	12	0 0 50·17	3 55 37·5	161·10
13	22 19 18·68	15 50 20·7	137·90	13	0 2 55·25	3 39 30·9	161·25
14	22 21 34·21	15 36 33·3	138·75	14	0 5 0·22	3 23 23·4	161·37
15	22 23 49·43	15 22 40·8	139·58	15	0 7 5·08	3 7 15·2	161·47
16	22 26 4·33	15 8 43·3	140·40	16	0 9 9·84	2 51 6·4	161·55
17	22 28 18·92	14 54 40·9	141·20	17	0 11 14·51	2 34 57·1	161·63
18	22 30 33·20	14 40 33·7	142·00	18	0 13 19·09	2 18 47·3	161·70
19	22 32 47·18	14 26 21·7	142·77	19	0 15 23·57	2 2 37·1	161·75
20	22 35 0·87	14 12 5·1	143·52	20	0 17 27·97	1 46 26·6	161·77
21	22 37 14·26	13 57 44·0	144·27	21	0 19 32·30	1 30 16·0	161·80
22	22 39 27·36	13 43 18·4	144·98	22	0 21 36·56	1 14 5·2	161·80
23	22 41 40·17	S. 13 28 48·5	145·70	23	0 23 40·74	S. 0 57 54·4	161·80
	THURSDAY 10.				*SATURDAY* 12.		
0	22 43 52·69	S. 13 14 14·3	146·38	0	0 25 44·86	S. 0 41 43·6	161·77
1	22 46 4·93	12 59 36·0	147·07	1	0 27 48·93	0 25 33·0	161·73
2	22 48 16·90	12 44 53·6	147·73	2	0 29 52·94	S. 0 9 22·6	161·68
3	22 50 28·60	12 30 7·2	148·37	3	0 31 56·91	N. 0 6 47·5	161·62
4	22 52 40·02	12 15 17·0	149·02	4	0 34 0·84	0 22 57·2	161·53
5	22 54 51·18	12 0 22·9	149·62	5	0 36 4·73	0 39 6·4	161·43
6	22 57 2·08	11 45 25·2	150·22	6	0 38 8·58	0 55 15·0	161·33
7	22 59 12·73	11 30 23·9	150·78	7	0 40 12·41	1 11 23·0	161·22
8	23 1 23·12	11 15 19·2	151·37	8	0 42 16·21	1 27 30·3	161·08
9	23 3 33·26	11 0 11·0	151·92	9	0 44 19·99	1 43 36·8	160·92
10	23 5 43·16	10 44 59·5	152·47	10	0 46 23·75	1 59 42·3	160·77
11	23 7 52·82	10 29 44·7	152·97	11	0 48 27·51	2 15 46·9	160·58
12	23 10 2·25	10 14 26·9	153·48	12	0 50 31·25	2 31 50·4	160·40
13	23 12 11·45	9 59 6·0	153·97	13	0 52 35·00	2 47 52·8	160·18
14	23 14 20·42	9 43 42·2	154·43	14	0 54 38·75	3 3 53·9	159·97
15	23 16 29·17	9 28 15·6	154·90	15	0 56 42·52	3 19 53·7	159·73
16	23 18 37·71	9 12 46·2	155·35	16	0 58 46·29	3 35 52·1	159·50
17	23 20 46·03	8 57 14·1	155·78	17	1 0 50·08	3 51 49·1	159·22
18	23 22 54·15	8 41 39·4	156·18	18	1 2 53·90	4 7 44·4	158·97
19	23 25 2·06	8 26 2·3	156·58	19	1 4 57·74	4 23 38·2	158·67
20	23 27 9·77	8 10 22·8	156·98	20	1 7 1·60	4 39 30·2	158·37
21	23 29 17·29	7 54 40·9	157·33	21	1 9 5·50	4 55 20·4	158·05
22	23 31 24·63	7 38 56·9	157·70	22	1 11 9·45	5 11 8·[illegible]	
23	23 33 31·78	7 23 10·7	158·03	23	1 13 13·44	5 26 5·[illegible]	
24	23 35 38·74	S. 7 7 22·5		24	1 15 17·47	N. 5 42 3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 13.		
	h m s	° ′ ″	″
0	1 15 17·47	N. 5 42 39·4	157·03
1	1 17 21·56	5 58 21·6	156·67
2	1 19 25·70	6 14 1·6	156·28
3	1 21 29·90	6 29 39·3	155·88
4	1 23 34·17	6 45 14·6	155·47
5	1 25 38·50	7 0 47·4	155·05
6	1 27 42·91	7 16 17·7	154·62
7	1 29 47·40	7 31 45·4	154·17
8	1 31 51·96	7 47 10·4	153·70
9	1 33 56·61	8 2 32·6	153·22
10	1 36 1·35	8 17 51·9	152·73
11	1 38 6·18	8 33 8·3	152·23
12	1 40 11·11	8 48 21·7	151·72
13	1 42 16·14	9 3 32·0	151·17
14	1 44 21·27	9 18 39·0	150·63
15	1 46 26·51	9 33 42·8	150·08
16	1 48 31·86	9 48 43·3	149·50
17	1 50 37·32	10 3 40·3	148·93
18	1 52 42·90	10 18 33·9	148·32
19	1 54 48·60	10 33 23·8	147·72
20	1 56 54·43	10 48 10·1	147·10
21	1 59 0·39	11 2 52·7	146·45
22	2 1 6·47	11 17 31·4	145·80
23	2 3 12·69	N.11 32 6·2	145·15
	MONDAY 14.		
0	2 5 19·05	N.11 46 37·1	144·47
1	2 7 25·55	12 1 3·9	143·78
2	2 9 32·19	12 15 26·6	143·08
3	2 11 38·97	12 29 45·1	142·37
4	2 13 45·91	12 43 59·3	141·63
5	2 15 53·00	12 58 9·1	140·90
6	2 18 0·24	13 12 14·5	140·15
7	2 20 7·64	13 26 15·4	139·38
8	2 22 15·20	13 40 11·7	138·62
9	2 24 22·92	13 54 3·4	137·80
10	2 26 30·81	14 7 50·2	137·02
11	2 28 38·86	14 21 32·3	136·20
12	2 30 47·08	14 35 9·5	135·37
13	2 32 55·47	14 48 41·7	134·53
14	2 35 4·04	15 2 8·9	133·65
15	2 37 12·79	15 15 31·0	132·82
16	2 39 21·71	15 28 47·9	131·93
17	2 41 30·81	15 41 59·5	131·03
18	2 43 40·09	15 55 5·7	130·15
19	2 45 49·55	16 8 6·6	129·23
20	2 47 59·20	16 21 2·0	128·30
21	2 50 9·04	16 33 51·8	127·37
22	2 52 19·06	16 46 36·0	126·42
'	2 54 29·27	16 59 14·5	125·45
	2 56 39·67	N.17 11 47·2	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 15.		
	h m s	° ′ ″	″
0	2 56 39·67	N.17 11 47·2	124·48
1	2 58 50·27	17 24 14·1	123·48
2	3 1 1·05	17 36 35·0	122·50
3	3 3 12·03	17 48 50·0	121·48
4	3 5 23·21	18 0 58·9	120·47
5	3 7 34·58	18 13 1·7	119·43
6	3 9 46·14	18 24 58·3	118·38
7	3 11 57·90	18 36 48·6	117·35
8	3 14 9·86	18 48 32·7	116·27
9	3 16 22·01	19 0 10·3	115·20
10	3 18 34·36	19 11 41·5	114·10
11	3 20 46·90	19 23 6·1	113·02
12	3 22 59·64	19 34 24·2	111·90
13	3 25 12·58	19 45 35·6	110·78
14	3 27 25·72	19 56 40·3	109·67
15	3 29 39·06	20 7 38·3	108·52
16	3 31 52·59	20 18 29·3	107·35
17	3 34 6·31	20 29 13·5	106·22
18	3 36 20·23	20 39 50·8	105·03
19	3 38 34·35	20 50 21·0	103·85
20	3 40 48·66	21 0 44·1	102·65
21	3 43 3·16	21 11 0·0	101·47
22	3 45 17·85	21 21 8·8	100·25
23	3 47 32·74	N.21 31 10·3	99·03
	WEDNESDAY 16.		
0	3 49 47·81	N.21 41 4·5	97·80
1	3 52 3·07	21 50 51·3	96·57
2	3 54 18·52	22 0 30·7	95·32
3	3 56 34·14	22 10 2·6	94·05
4	3 58 49·95	22 19 26·9	92·80
5	4 1 5·95	22 28 43·7	91·52
6	4 3 22·12	22 37 52·8	90·23
7	4 5 38·46	22 46 54·2	88·95
8	4 7 54·98	22 55 47·9	87·65
9	4 10 11·68	23 4 33·8	86·33
10	4 12 28·54	23 13 11·8	85·03
11	4 14 45·57	23 21 42·0	83·70
12	4 17 2·77	23 30 4·2	82·38
13	4 19 20·13	23 38 18·5	81·03
14	4 21 37·64	23 46 24·7	79·68
15	4 23 55·31	23 54 22·8	78·35
16	4 26 13·14	24 2 12·9	76·97
17	4 28 31·11	24 9 54·7	75·62
18	4 30 49·23	24 17 28·4	74·25
19	4 33 7·50	24 24 53·9	72·85
20	4 35 25·90	24 32 11·0	71·48
21	4 37 44·44	24 39 19·9	70·08
22	4 40 3·11	24 46 20·4	68·68
23	4 42 21·91	24 53 12·5	67·28
24	4 44 40·83	N.24 59 56·2	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 17.				*SATURDAY* 19.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	4 44 40·83	N.24 59 56·2	65·87	0	6 36 40·96	N.27 31 38·5	4·30
1	4 46 59·88	25 6 31·4	64·47	1	6 38 59·86	27 31 12·7	5·73
2	4 49 19·04	25 12 58·2	63·03	2	6 41 18·62	27 30 38·3	7·17
3	4 51 38·31	25 19 16·4	61·62	3	6 43 37·24	27 29 55·3	8·58
4	4 53 57·69	25 25 26·1	60·17	4	6 45 55·71	27 29 3·8	10·00
5	4 56 17·17	25 31 27·1	58·75	5	6 48 14·03	27 28 3·8	11·42
6	4 58 36·75	25 37 19·6	57·32	6	6 50 32·20	27 26 55·3	12·83
7	5 0 56·43	25 43 3·5	55·87	7	6 52 50·20	27 25 38·3	14·25
8	5 3 16·20	25 48 38·7	54·42	8	6 55 8·04	27 24 12·9	15·63
9	5 5 36·05	25 54 5·2	52·98	9	6 57 25·71	27 22 39·1	17·01
10	5 7 55·98	25 59 23·1	51·52	10	6 59 43·21	27 20 57·0	18·42
11	5 10 15·99	26 4 32·2	50·07	11	7 2 0·52	27 19 6·5	19·80
12	5 12 36·07	26 9 32·6	48·60	12	7 4 17·65	27 17 7·7	21·17
13	5 14 56·22	26 14 24·2	47·15	13	7 6 34·60	27 15 0·7	22·55
14	5 17 16·42	26 19 7·1	45·67	14	7 8 51·35	27 12 45·4	23·90
15	5 19 36·68	26 23 41·1	44·22	15	7 11 7·90	27 10 22·0	25·27
16	5 21 57·00	26 28 6·4	42·73	16	7 13 24·26	27 7 50·4	26·62
17	5 24 17·35	26 32 22·8	41·27	17	7 15 40·41	27 5 10·7	27·95
18	5 26 37·75	26 36 30·4	39·78	18	7 17 56·35	27 2 23·0	29·30
19	5 28 58·18	26 40 29·1	38·32	19	7 20 12·08	26 59 27·2	30·63
20	5 31 18·64	26 44 19·0	36·85	20	7 22 27·59	26 56 23·4	31·95
21	5 33 39·12	26 48 0·1	35·35	21	7 24 42·88	26 53 11·7	33·27
22	5 35 59·62	26 51 32·2	33·88	22	7 26 57·95	26 49 52·1	34·58
23	5 38 20·14	N.26 54 55·5	32·40	23	7 29 12·79	N.26 46 24·6	35·88
	FRIDAY 18.				*SUNDAY* 20.		
0	5 40 40·67	N.26 58 9·9	30·92	0	7 31 27·39	N.26 42 49·3	37·18
1	5 43 1·20	27 1 15·4	29·43	1	7 33 41·77	26 39 6·2	38·47
2	5 45 21·72	27 4 12·0	27·97	2	7 35 55·90	26 35 15·4	39·75
3	5 47 42·23	27 6 59·8	26·47	3	7 38 9·80	26 31 16·9	41·03
4	5 50 2·72	27 9 38·6	25·00	4	7 40 23·45	26 27 10·7	42·28
5	5 52 23·20	27 12 8·6	23·50	5	7 42 36·86	26 22 57·0	43·57
6	5 54 43·66	27 14 29·6	22·03	6	7 44 50·02	26 18 35·6	44·80
7	5 57 4·08	27 16 41·8	20·55	7	7 47 2·93	26 14 6·8	46·05
8	5 59 24·46	27 18 45·1	19·07	8	7 49 15·58	26 9 30·5	47·28
9	6 1 44·80	27 20 39·5	17·60	9	7 51 27·98	26 4 46·8	48·52
10	6 4 5·09	27 22 25·1	16·12	10	7 53 40·11	25 59 55·7	49·73
11	6 6 25·33	27 24 1·8	14·63	11	7 55 51·99	25 54 57·3	50·95
12	6 8 45·51	27 25 29·6	13·17	12	7 58 3·60	25 49 51·6	52·15
13	6 11 5·62	27 26 48·6	11·70	13	8 0 14·95	25 44 38·7	53·35
14	6 13 25·66	27 27 58·8	10·22	14	8 2 26·03	25 39 18·6	54·55
15	6 15 45·63	27 29 0·1	8·77	15	8 4 36·85	25 33 51·3	55·72
16	6 18 5·51	27 29 52·7	7·30	16	8 6 47·39	25 28 17·0	56·88
17	6 20 25·31	27 30 36·5	5·83	17	8 8 57·66	25 22 35·7	58·05
18	6 22 45·01	27 31 11·5	4·37	18	8 11 7·66	25 16 47·4	59·22
19	6 25 4·61	27 31 37·7	2·93	19	8 13 17·38	25 10 52·1	60·35
20	6 27 24·11	27 31 55·3	1·47	20	8 15 26·83	25 4 50·0	61·50
21	6 29 43·50	27 32 4·1	0·02	21	8 17 36·00	24 58 41·0	62
22	6 32 2·78	27 32 4·2	1·42	22	8 19 44·89	24 52 25·3	
23	6 34 21·93	27 31 55·7	2·87	23	8 21 53·50	24 46 2	
24	6 36 40·96	N.27 31 38·5		24	8 24 1·82	N.24 39	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 21.				*WEDNESDAY 23.*		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	8 24 1·82	N.24 39 33·7	65·95	0	10 1 17·90	N.17 34 1·2	109·08
1	8 26 9·87	24 32 58·0	67·07	1	10 3 13·29	17 23 6·7	109·80
2	8 28 17·63	24 26 15·6	68·13	2	10 5 8·47	17 12 7·9	110·48
3	8 30 25·11	24 19 26·8	69·22	3	10 7 3·44	17 1 5·0	111·18
4	8 32 32·31	24 12 31·5	70·28	4	10 8 58·20	16 49 57·9	111·85
5	8 34 39·23	24 5 29·8	71·35	5	10 10 52·75	16 38 46·8	112·53
6	8 36 45·86	23 58 21·7	72·40	6	10 12 47·10	16 27 31·6	113·18
7	8 38 52·21	23 51 7·3	73·45	7	10 14 41·24	16 16 12·5	113·85
8	8 40 58·27	23 43 46·6	74·48	8	10 16 35·19	16 4 49·4	114·52
9	8 43 4·05	23 36 19·7	75·50	9	10 18 28·95	15 53 22·3	115·15
10	8 45 9·55	23 28 46·7	76·53	10	10 20 22·51	15 41 51·4	115·78
11	8 47 14·76	23 21 7·5	77·53	11	10 22 15·89	15 30 16·7	116·42
12	8 49 19·69	23 13 22·3	78·53	12	10 24 9·09	15 18 38·2	117·03
13	8 51 24·33	23 5 31·1	79·53	13	10 26 2·10	15 6 56·0	117·67
14	8 53 28·69	22 57 33·9	80·52	14	10 27 54·93	14 55 10·0	118·25
15	8 55 32·77	22 49 30·8	81·50	15	10 29 47·60	14 43 20·5	118·87
16	8 57 36·58	22 41 21·8	82·47	16	10 31 40·09	14 31 27·3	119·47
17	8 59 40·10	22 33 7·0	83·42	17	10 33 32·41	14 19 30·5	120·03
18	9 1 43·34	22 24 46·5	84·37	18	10 35 24·57	14 7 30·3	120·63
19	9 3 46·31	22 16 20·3	85·32	19	10 37 16·57	13 55 26·5	121·20
20	9 5 48·99	22 7 48·4	86·25	20	10 39 8·42	13 43 19·3	121·77
21	9 7 51·40	21 59 10·9	87·17	21	10 41 0·11	13 31 8·7	122·33
22	9 9 53·54	21 50 27·9	88·10	22	10 42 51·65	13 18 54·7	122·88
23	9 11 55·40	N.21 41 39·3	89·00	23	10 44 43·05	N.13 6 37·4	123·42
	TUESDAY 22.				*THURSDAY 24.*		
0	9 13 57·00	N.21 32 45·3	89·90	0	10 46 34·31	N.12 54 16·9	123·97
1	9 15 58·32	21 23 45·9	90·80	1	10 48 25·43	12 41 53·1	124·50
2	9 17 59·36	21 14 41·1	91·67	2	10 50 16·41	12 29 26·1	125·02
3	9 20 0·14	21 5 31·1	92·55	3	10 52 7·27	12 16 56·0	125·53
4	9 22 0·65	20 56 15·8	93·42	4	10 53 58·00	12 4 22·8	126·07
5	9 24 0·90	20 46 55·3	94·28	5	10 55 48·60	11 51 46·4	126·55
6	9 26 0·88	20 37 29·6	95·12	6	10 57 39·08	11 39 7·1	127·07
7	9 28 0·60	20 27 58·9	95·98	7	10 59 29·45	11 26 24·7	127·55
8	9 30 0·06	20 18 23·0	96·80	8	11 1 19·71	11 13 39·4	128·03
9	9 31 59·26	20 8 42·2	97·63	9	11 3 9·86	11 0 51·2	128·52
10	9 33 58·21	19 58 56·4	98·45	10	11 4 59·91	10 48 0·1	129·00
11	9 35 56·91	19 49 5·7	99·27	11	11 6 49·86	10 35 6·1	129·45
12	9 37 55·35	19 39 10·1	100·07	12	11 8 39·71	10 22 9·4	129·92
13	9 39 53·54	19 29 9·7	100·85	13	11 10 29·47	10 9 9·9	130·37
14	9 41 51·49	19 19 4·6	101·65	14	11 12 19·15	9 56 7·7	130·82
15	9 43 49·20	19 8 54·7	102·42	15	11 14 8·74	9 43 2·8	131·27
16	9 45 46·66	18 58 40·2	103·20	16	11 15 58·25	9 29 55·2	131·68
17	9 47 43·88	18 48 21·0	103·95	17	11 17 47·69	9 16 45·1	132·12
18	9 49 40·86	18 37 57·3	104·72	18	11 19 37·06	9 3 32·4	132·53
19	9 51 37·60	18 27 29·0	105·45	19	11 21 26·36	8 50 17·2	132·95
20	9 53 34·12	18 16 56·3	106·22	20	11 23 15·60	8 36 59·5	133·35
21	9 55 30·41	18 6 19·0	106·93	21	11 25 4·78	8 23 39·4	133·75
22	9 57 26·47	17 55 37·4	107·65	22	11 26 53·91	8 10 16·9	134·15
23	9 59 22·30	17 44 51·5	108·38	23	11 28 42·99	7 56 52·0	134·53
	10	N.17 34 1·2		24	11 30 32·02	N. 7 43 24·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 25.		
	h m s	° ′ ″	″
0	11 30 32·02	N. 7 43 24·8	134·90
1	11 32 21·01	7 29 55·4	135·28
2	11 34 9·96	7 16 23·7	135·65
3	11 35 58·89	7 2 49·8	136·00
4	11 37 47·78	6 49 13·8	136·37
5	11 39 36·65	6 35 35·6	136·70
6	11 41 25·50	6 21 55·4	137·03
7	11 43 14·33	6 8 13·2	137·38
8	11 45 3·16	5 54 28·9	137·70
9	11 46 51·97	5 40 42·7	138·02
10	11 48 40·79	5 26 54·6	138·33
11	11 50 29·61	5 13 4·6	138·63
12	11 52 18·43	4 59 12·8	138·93
13	11 54 7·27	4 45 19·2	139·23
14	11 55 56·12	4 31 23·8	139·52
15	11 57 44·99	4 17 26·7	139·78
16	11 59 33·89	4 3 28·0	140·07
17	12 1 22·81	3 49 27·6	140·32
18	12 3 11·77	3 35 25·7	140·58
19	12 5 0·77	3 21 22·2	140·82
20	12 6 49·82	3 7 17·3	141·07
21	12 8 38·91	2 53 10·9	141·30
22	12 10 28·05	2 39 3·1	141·53
23	12 12 17·25	N. 2 24 53·9	141·75
	SATURDAY 26.		
0	12 14 6·50	N. 2 10 43·4	141·95
1	12 15 55·83	1 56 31·7	142·17
2	12 17 45·23	1 42 18·7	142·37
3	12 19 34·71	1 28 4·5	142·55
4	12 21 24·26	1 13 49·2	142·72
5	12 23 13·90	0 59 32·9	142·92
6	12 25 3·63	0 45 15·4	143·07
7	12 26 53·46	0 30 57·0	143·22
8	12 28 43·38	0 16 37·7	143·38
9	12 30 33·40	N. 0 2 17·4	143·53
10	12 32 23·53	S. 0 12 3·8	143·65
11	12 34 13·78	0 26 25·7	143·78
12	12 36 4·15	0 40 48·4	143·90
13	12 37 54·64	0 55 11·8	144·02
14	12 39 45·25	1 9 35·9	144·12
15	12 41 36·00	1 24 0·6	144·22
16	12 43 26·88	1 38 25·9	144·30
17	12 45 17·91	1 52 51·7	144·37
18	12 47 9·08	2 7 17·9	144·45
19	12 49 0·41	2 21 44·6	144·50
20	12 50 51·89	2 36 11·6	144·55
21	12 52 43·53	2 50 38·9	144·58
22	12 54 35·34	3 5 6·4	144·63
23	12 56 27·32	3 19 34·2	144·63
24	12 58 19·48	S. 3 34 2·0	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 27.		
	h m s	° ′ ″	″
0	12 58 19·48	S. 3 34 2·0	144·65
1	13 0 11·82	3 48 29·9	144·67
2	13 2 4·35	4 2 57·9	144·67
3	13 3 57·07	4 17 25·9	144·65
4	13 5 49·98	4 31 53·8	144·62
5	13 7 43·10	4 46 21·5	144·58
6	13 9 36·42	5 0 49·0	144·55
7	13 11 29·95	5 15 16·3	144·48
8	13 13 23·69	5 29 43·2	144·43
9	13 15 17·66	5 44 9·8	144·35
10	13 17 11·86	5 58 35·9	144·27
11	13 19 6·28	6 13 1·5	144·18
12	13 21 0·93	6 27 26·6	144·07
13	13 22 55·82	6 41 51·0	143·97
14	13 24 50·96	6 56 14·8	143·83
15	13 26 46·35	7 10 37·8	143·70
16	13 28 42·00	7 25 0·0	143·55
17	13 30 37·90	7 39 21·3	143·38
18	13 32 34·07	7 53 41·6	143·22
19	13 34 30·51	8 8 0·9	143·05
20	13 36 27·22	8 22 19·2	142·83
21	13 38 24·22	8 36 36·2	142·65
22	13 40 21·49	8 50 52·1	142·43
23	13 42 19·06	S. 9 5 6·7	142·20
	MONDAY 28.		
0	13 44 16·93	S. 9 19 19·9	141·97
1	13 46 15·09	9 33 31·7	141·70
2	13 48 13·56	9 47 41·9	141·45
3	13 50 12·33	10 1 50·6	141·17
4	13 52 11·41	10 15 57·6	140·88
5	13 54 10·82	10 30 2·9	140·58
6	13 56 10·55	10 44 6·4	140·27
7	13 58 10·60	10 58 8·0	139·93
8	14 0 10·99	11 12 7·6	139·60
9	14 2 11·71	11 26 5·2	139·23
10	14 4 12·78	11 40 0·6	138·88
11	14 6 14·19	11 53 53·9	138·50
12	14 8 15·95	12 7 44·9	138·10
13	14 10 18·06	12 21 33·5	137·70
14	14 12 20·54	12 35 19·7	137·28
15	14 14 23·37	12 49 3·4	136·83
16	14 16 26·58	13 2 44·4	136·40
17	14 18 30·16	13 16 22·8	135·92
18	14 20 34·12	13 29 58·3	135·45
19	14 22 38·45	13 43 31·0	134·97
20	14 24 43·18	13 57 0·8	134·45
21	14 26 48·29	14 10 27·5	133·92
22	14 28 53·80	14 23 51·0	133·
23	14 30 59·70	14 37 11·4	13·
24	14 33 6·01	S. 14 50 28·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 29.		
	h m s	° ′ ″	″
0	14 33 6·01	S. 14 50 28·4	132·27
1	14 35 12·72	15 3 42·0	131·70
2	14 37 19·84	15 16 52·2	131·08
3	14 39 27·38	15 29 58·7	130·47
4	14 41 35·33	15 43 1·5	129·85
5	14 43 43·70	15 56 0·6	129·20
6	14 45 52·50	16 8 55·8	128·53
7	14 48 1·73	16 21 47·0	127·85
8	14 50 11·39	16 34 34·1	127·17
9	14 52 21·48	16 47 17·1	126·45
10	14 54 32·01	16 59 55·8	125·72
11	14 56 42·98	17 12 30·1	124·97
12	14 58 54·39	17 24 59·9	124·22
13	15 1 6·25	17 37 25·2	123·42
14	15 3 18·57	17 49 45·7	122·63
15	15 5 31·33	18 2 1·5	121·83
16	15 7 44·55	18 14 12·5	120·98
17	15 9 58·23	18 26 18·4	120·13
18	15 12 12·37	18 38 19·2	119·28
19	15 14 26·97	18 50 14·9	118·38
20	15 16 42·04	19 2 5·2	117·50
21	15 18 57·57	19 13 50·2	116·57
22	15 21 13·57	19 25 29·6	115·65
23	15 23 30·04	S. 19 37 3·5	114·68
	WEDNESDAY 30.		
0	15 25 46·98	S. 19 48 31·6	113·72
1	15 28 4·39	19 59 53·9	112·73
2	15 30 22·28	20 11 10·3	111·72
3	15 32 40·65	20 22 20·6	110·70
4	15 34 59·49	20 33 24·8	109·65
5	15 37 18·81	20 44 22·7	108·58
6	15 39 38·61	20 55 14·2	107·50
7	15 41 58·89	21 5 59·2	106·40
8	15 44 19·64	21 16 37·6	105·28
9	15 46 40·88	21 27 9·3	104·15
10	15 49 2·59	21 37 34·2	103·00
11	15 51 24·78	21 47 52·2	101·82
12	15 53 47·45	21 58 3·1	100·63
13	15 56 10·60	22 8 6·9	99·40
14	15 58 34·23	22 18 3·3	98·18
15	16 0 58·33	22 27 52·4	96·95
16	16 3 22·91	22 37 34·1	95·67
17	16 5 47·97	22 47 8·1	94·38
18	16 8 13·49	22 56 34·4	93·08
19	16 10 39·49	23 5 52·9	91·75
20	16 13 5·96	23 15 3·4	90·43
21	16 15 32·89	23 24 6·0	89·07
22	[illegible] 0·28	23 33 0·4	87·68
23	[illegible]	23 41 46·5	86·30
		23 50 24·3	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 31.		
	h m s	° ′ ″	″
0	16 22 56·45	S. 23 50 24·3	84·88
1	16 25 25·22	23 58 53·6	83·47
2	16 27 54·45	24 7 14·4	82·02
3	16 30 24·12	24 15 26·5	80·55
4	16 32 54·24	24 23 29·8	79·07
5	16 35 24·80	24 31 24·2	77·57
6	16 37 55·80	24 39 9·6	76·07
7	16 40 27·22	24 46 46·0	74·52
8	16 42 59·08	24 54 13·1	72·97
9	16 45 31·36	25 1 30·9	71·40
10	16 48 4·05	25 8 39·3	69·83
11	16 50 37·15	25 15 38·3	68·22
12	16 53 10·65	25 22 27·6	66·60
13	16 55 44·56	25 29 7·2	64·98
14	16 58 18·86	25 35 37·1	63·33
15	17 0 53·56	25 41 57·1	61·67
16	17 3 28·63	25 48 7·1	59·98
17	17 6 4·07	25 54 7·0	58·30
18	17 8 39·89	25 59 56·8	56·58
19	17 11 16·06	26 5 36·3	54·87
20	17 13 52·58	26 11 5·5	53·15
21	17 16 29·45	26 16 24·4	51·38
22	17 19 6·66	26 21 32·7	49·63
23	17 21 44·20	S. 26 26 30·5	47·85
	FRIDAY, JUNE 1.		
0	17 24 22·05	S. 26 31 17·6	

PHASES OF THE MOON.

	d	h	m
○ Full Moon - -	1	16	3·1
☾ *Last Quarter* -	8	15	1·5
● New Moon - -	15	14	13·3
☽ *First Quarter* -	23	12	2·3
○ Full Moon - -	31	2	47·7

	d	h
☾ Perigee - - - - -	8	20
☾ Apogee - - - - -	22	12

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Pollux	W.	100 58 46	2627	102 37 4	2615	104 15 39	2603	105 54 30	2590
	Regulus	W.	64 33 53	2641	66 11 52	2629	67 50 7	2618	69 28 38	2606
	Spica ♍	W.	10 58 41	2887	12 31 17	2815	14 5 26	2762	15 40 44	2720
	Antares	E.	35 45 17	2635	34 7 10	2625	32 28 49	2614	30 50 13	2604
	α Aquilæ	E.	87 12 58	3465	85 51 55	3456	84 30 42	3450	83 9 22	3445
	Jupiter	E.	116 16 55	2687	114 39 58	2675	113 2 45	2663	111 25 15	2651
2	Regulus	W.	77 45 13	2549	79 25 18	2538	81 5 38	2528	82 46 13	2518
	Spica ♍	W.	23 48 17	2594	25 27 20	2576	27 6 48	2560	28 46 38	2546
	Antares	E.	22 33 55	2560	20 54 5	2554	19 14 7	2549	17 34 2	2547
	α Aquilæ	E.	76 21 40	3439	75 0 7	3443	73 38 39	3448	72 17 17	3456
	Jupiter	E.	103 13 46	2593	101 34 41	2582	99 55 22	2572	98 15 48	2561
	Fomalhaut	E.	105 2 16	2720	103 26 3	2707	101 49 32	2695	100 12 45	2681
3	Regulus	W.	91 12 31	2471	92 54 25	2462	94 36 32	2453	96 18 51	2445
	Spica ♍	W.	37 10 30	2483	38 52 7	2473	40 33 58	2463	42 16 4	2453
	α Aquilæ	E.	65 33 28	3530	64 13 37	3553	62 54 11	3579	61 35 14	3609
	Jupiter	E.	89 54 31	2513	88 13 36	2504	86 32 28	2496	84 51 9	2487
	Fomalhaut	E.	92 5 0	2631	90 26 47	2621	88 48 21	2614	87 9 45	2606
	α Pegasi	E.	111 37 45	2893	110 5 17	2874	108 32 25	2858	106 59 12	2842
4	Regulus	W.	104 53 9	2409	106 36 31	2403	108 20 2	2396	110 3 42	2390
	Spica ♍	W.	50 49 48	2410	52 33 9	2403	54 16 40	2396	56 0 21	2389
	α Aquilæ	E.	55 9 55	3822	53 55 16	3881	52 41 37	3947	51 29 5	4020
	Jupiter	E.	76 21 44	2450	74 39 20	2443	72 56 47	2436	71 14 4	2431
	Fomalhaut	E.	78 54 19	2576	77 14 51	2572	75 35 17	2568	73 55 38	2565
	α Pegasi	E.	99 8 26	2778	97 33 30	2769	95 58 21	2760	94 23 0	2752
5	Spica ♍	W.	64 41 4	2359	66 25 37	2354	68 10 18	2349	69 55 6	2345
	Antares	W.	18 48 32	2378	20 32 38	2369	22 16 57	2361	24 1 28	2353
	Jupiter	E.	62 38 30	2405	60 55 2	2400	59 11 27	2396	57 27 47	2392
	Fomalhaut	E.	65 36 43	2561	63 56 55	2564	62 17 10	2566	60 37 28	2570
	α Pegasi	E.	86 24 2	2725	84 47 56	2722	83 11 46	2721	81 35 34	2720
	Sun	E.	137 41 13	2657	136 3 35	2652	134 25 50	2647	132 47 59	2643
6	Spica ♍	W.	78 40 37	2326	80 25 59	2323	82 11 25	2320	83 56 56	2317
	Antares	W.	32 46 22	2326	34 31 43	2322	36 17 10	2319	38 2 41	2315
	Jupiter	E.	48 48 11	2378	47 4 5	2376	45 19 56	2374	43 35 44	2373
	Fomalhaut	E.	52 20 49	2607	50 42 3	2619	49 3 34	2632	47 25 23	2649
	α Pegasi	E.	73 34 43	2731	71 58 44	2736	70 22 52	2743	68 47 9	2750
	Sun	E.	124 37 15	2623	122 58 51	2619	121 20 22	2616	119 41 49	2614
7	Spica ♍	W.	92 45 25	2306	94 31 15	2304	96 17 8	2303	98 3 3	2302
	Antares	W.	46 51 27	2302	48 37 23	2300	50 23 22	2299	52 9 23	2297
	Jupiter	E.	34 54 34	2374	33 10 22	2376	31 26 13	2380	29 42 9	2383
	Fomalhaut	E.	39 21 14	2776	37 46 15	2814	36 12 6	2859	34 38 54	2911
	α Pegasi	E.	60 51 46	2812	59 17 34	2830	57 43 45	2849	56 10 21	2873
	Sun	E.	111 28 12	2602	109 49 20	2600	108 10 25	2599	106 31 29	2597
8	Spica ♍	W.	106 52 58	2298	108 39 0	2298	110 25 2	2298	112 11 4	2298
	Antares	W.	61 0 0	2292	62 46 11	2291	64 32 24	2291	66 18 [illegible]	
	α Pegasi	E.	48 31 46	3030	47 2 11	3074	45 33 30	31		
	Sun	E.	98 16 20	2593	96 37 15	2592	94 58 0			

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Pollux W.	107 33 36	2580	109 12 58	2569	110 52 35	2558	112 32 28	2547
	Regulus W.	71 7 25	2593	72 46 29	2582	74 25 48	2571	76 5 23	2560
	Spica ♍ W.	17 16 57	2687	18 53 55	2658	20 31 31	2635	22 9 39	2613
	Antares E.	29 11 23	2593	27 32 19	2585	25 53 3	2576	24 13 35	2567
	α Aquilæ E.	81 47 56	3440	80 26 25	3438	79 4 51	3436	77 43 15	3437
	Jupiter E.	109 47 29	2639	108 9 27	2627	106 31 9	2615	104 52 35	2604
2	Regulus W.	84 27 1	2508	86 8 3	2498	87 49 19	2488	89 30 49	2479
	Spica ♍ W.	30 26 47	2531	32 7 17	2519	33 48 4	2506	35 29 9	2494
	Antares E.	15 53 54	2547	14 13 46	2551	12 33 44	2562	10 53 57	2585
	α Aquilæ E.	70 56 4	3466	69 35 2	3478	68 14 13	3493	66 53 41	3510
	Jupiter E.	96 36 0	2551	94 55 58	2541	93 15 42	2532	91 35 13	2522
	Fomalhaut E.	98 35 41	2671	96 58 22	2660	95 20 49	2649	93 43 1	2640
3	Regulus W.	98 1 21	2438	99 44 2	2430	101 26 54	2422	103 9 57	2416
	Spica ♍ W.	43 58 24	2443	45 40 57	2435	47 23 42	2426	49 6 39	2418
	α Aquilæ E.	60 16 49	3643	58 59 1	3680	57 41 53	3722	56 25 29	3769
	Jupiter E.	83 9 38	2479	81 27 55	2472	79 46 2	2464	78 3 58	2457
	Fomalhaut E.	85 30 58	2599	83 52 1	2592	82 12 55	2586	80 33 41	2580
	α Pegasi E.	105 25 38	2827	103 51 45	2814	102 17 35	2801	100 43 8	2789
4	Regulus W.	111 47 31	2385	113 31 27	2380	115 15 31	2375	116 59 42	2370
	Spica ♍ W.	57 44 11	2382	59 28 12	2376	61 12 21	2371	62 56 38	2364
	α Aquilæ E.	50 17 45	4101	49 7 44	4192	47 59 10	4292	46 52 10	4405
	Jupiter E.	69 31 13	2425	67 48 14	2419	66 5 6	2414	64 21 52	2409
	Fomalhaut E.	72 15 55	2563	70 36 9	2561	68 56 21	2561	67 16 32	2561
	α Pegasi E.	92 47 29	2744	91 11 48	2738	89 35 59	2734	88 0 4	2729
5	Spica ♍ W.	71 40 0	2340	73 25 1	2337	75 10 7	2333	76 55 19	2328
	Antares W.	25 46 10	2347	27 31 1	2341	29 16 1	2336	31 1 8	2331
	Jupiter E.	55 44 1	2389	54 0 10	2385	52 16 14	2383	50 32 15	2380
	Fomalhaut E.	58 57 52	2574	57 18 22	2580	55 39 0	2588	53 59 49	2596
	α Pegasi E.	79 59 21	2720	78 23 8	2721	76 46 56	2723	75 10 47	2727
	Sun E.	131 10 2	2638	129 31 58	2634	127 53 49	2630	126 15 35	2626
6	Spica ♍ W.	85 42 31	2314	87 28 10	2312	89 13 52	2310	90 59 37	2308
	Antares W.	39 48 18	2313	41 33 59	2309	43 19 45	2307	45 5 34	2304
	Jupiter E.	41 51 31	2373	40 7 17	2372	38 23 2	2372	36 38 47	2373
	Fomalhaut E.	45 47 35	2668	44 10 12	2689	42 33 18	2714	40 56 57	2743
	α Pegasi E.	67 11 36	2760	65 36 16	2770	64 1 9	2782	62 26 18	2797
	Sun E.	118 3 13	2611	116 24 33	2608	114 45 49	2606	113 7 2	2604
7	Spica ♍ W.	99 48 59	2301	101 34 57	2300	103 20 57	2300	105 6 57	2299
	Antares W.	53 55 27	2296	55 41 33	2295	57 27 40	2294	59 13 49	2292
	Jupiter E.	27 58 10	2388	26 14 18	2394	24 30 35	2403	22 47 5	2414
	Fomalhaut E.	33 6 49	2971	31 36 0	3043	30 6 41	3127	28 39 4	3227
	α Pegasi E.	54 37 27	2898	53 5 5	2925	51 33 18	2956	50 2 10	2991
	Sun E.	104 52 30	2596	103 13 30	2595	101 34 28	2593	99 55 24	2593
8	Spica ♍ W.	113 57 7	2299	115 43 8	2299	117 29 9	2299	119 15 10	2300
	Antares W.	68 4 51	2290	69 51 5	2291	71 37 18	2290	73 23 32	2290
	α Pegasi E.	42 39 15	3241	41 13 54	3312	39 49 56	3392	38 27 30	3483
	Sun E.	91 39 56	2591	90 0 49	2591	88 21 42	2592	86 42 36	2592

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Antares	W.	75 9 46	2291	76 55 58	2291	78 42 10	2292	80 28 21	2293
	α Aquilæ	W.	41 13 16	5077	42 9 11	4881	43 7 41	4708	44 8 34	4554
	Sun	E.	85 3 30	2593	83 24 25	2593	81 45 21	2593	80 6 17	2595
10	Antares	W.	89 18 54	2299	91 4 55	2301	92 50 53	2303	94 36 48	2305
	α Aquilæ	W.	49 43 10	3982	50 55 7	3900	52 8 27	3825	53 23 3	3757
	Sun	E.	71 51 24	2602	70 12 32	2604	68 33 42	2605	66 54 54	2608
11	Antares	W.	103 25 34	2318	105 11 7	2321	106 56 36	2324	108 42 0	2328
	α Aquilæ	W.	59 51 50	3505	61 12 9	3467	62 33 10	3434	63 54 48	3404
	Fomalhaut	W.	25 38 43	3394	27 1 6	3274	28 25 48	3174	29 52 28	3091
	Jupiter	W.	21 49 45	2433	23 32 33	2425	25 15 32	2419	26 58 39	2416
	Sun	E.	58 41 48	2622	57 3 23	2625	55 25 2	2629	53 46 46	2633
12	α Aquilæ	W.	70 50 18	3299	72 14 31	3285	73 39 0	3273	75 3 43	3263
	Fomalhaut	W.	37 26 40	2833	39 0 25	2802	40 34 50	2776	42 9 49	2754
	Jupiter	W.	35 34 52	2415	37 18 5	2417	39 1 15	2420	40 44 21	2424
	α Pegasi	W.	26 33 4	5569	27 23 0	5187	28 17 31	4871	29 16 9	4604
	Sun	E.	45 36 51	2655	43 59 10	2660	42 21 37	2666	40 44 11	2672
13	α Aquilæ	W.	82 9 25	3242	83 34 44	3244	85 0 1	3246	86 25 16	3250
	Fomalhaut	W.	50 10 42	2686	51 47 41	2680	53 24 48	2674	55 2 3	2670
	Jupiter	W.	49 18 28	2446	51 0 57	2452	52 43 18	2458	54 25 30	2465
	α Pegasi	W.	34 57 34	3766	36 13 11	3662	37 30 39	3573	38 49 43	3494
18	Sun	W.	28 56 55	3156	30 23 57	3169	31 50 43	3182	33 17 14	3194
	Pollux	E.	25 36 22	2820	24 2 20	2835	22 28 37	2848	20 55 11	2862
	Regulus	E.	62 9 21	2827	60 35 28	2839	59 1 51	2852	57 28 30	2865
	Spica ♍	E.	116 12 24	2821	114 38 24	2832	113 4 38	2844	111 31 7	2856
19	Sun	W.	40 26 11	3254	41 51 16	3265	43 16 8	3276	44 40 47	3288
	Regulus	E.	49 45 43	2924	48 13 55	2937	46 42 23	2949	45 11 6	2960
	Spica ♍	E.	103 47 11	2911	102 15 6	2921	100 43 14	2931	99 11 35	2942
20	Sun	W.	51 40 55	3338	53 4 23	3347	54 27 40	3356	55 50 47	3365
	Regulus	E.	37 38 14	3017	36 8 23	3028	34 38 45	3040	33 9 22	3051
	Spica ♍	E.	91 36 24	2988	90 5 56	2997	88 35 39	3004	87 5 31	3012
21	Sun	W.	62 44 8	3400	64 6 24	3406	65 28 34	3411	66 50 38	3416
	Venus	W.	25 30 0	3498	26 50 27	3503	28 10 48	3507	29 31 5	3511
	Pollux	W.	11 16 15	3085	12 44 43	3079	14 13 18	3078	15 41 55	3077
	Regulus	E.	25 46 4	3115	24 18 12	3130	22 50 39	3147	21 23 26	3166
	Spica ♍	E.	79 37 10	3045	78 7 53	3051	76 38 43	3056	75 9 40	3061
22	Sun	W.	73 39 43	3434	75 1 21	3436	76 22 57	3437	77 44 32	3438
	Venus	W.	36 11 31	3525	37 31 27	3526	38 51 22	3527	40 11 16	3528
	Pollux	W.	23 5 2	3078	24 33 38	3080	26 2 12	3080	27 30 46	3080
	Spica ♍	E.	67 45 40	3078	66 17 4	3080	64 48 30	3082	63 19 58	3083
	Antares	E.	113 38 14	3070	112 9 28	3072	110 40 44	3073	109 12 2	3074
23	Sun	W.	84 32 16	3436	85 53 52	3434	87 15 30	3431	88 37 11	3428
	Venus	W.	46 50 47	3524	48 10 45	3521	[illegible]	[illegible]	[illegible]	[illegible]
	Pollux	W.	34 53 46	3074	36 22 27	3072	[illegible]	[illegible]	[illegible]	[illegible]
	Spica ♍	E.	55 57 32	3083	54 29 2	3082	[illegible]	[illegible]	[illegible]	[illegible]
	Antares	E.	101 48 37	3071	100 19 52	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Antares W.	82 14 31	2294	84 0 39	2295	85 46 46	2296	87 32 51	2298
	α Aquilæ W.	45 11 39	4413	46 16 49	4288	47 23 53	4175	48 32 43	4074
	Sun E.	78 27 15	2596	76 48 15	2597	75 9 16	2599	73 30 19	2600
10	Antares W.	96 22 40	2307	98 8 29	2309	99 54 15	2313	101 39 56	2315
	α Aquilæ W.	54 38 50	3696	55 55 41	3641	57 13 31	3590	58 32 16	3545
	Sun E.	65 16 10	2610	63 37 29	2613	61 58 52	2615	60 20 18	2618
11	Antares W.	110 27 18	2332	112 12 31	2336	113 57 38	2340	115 42 39	2345
	α Aquilæ W.	65 17 0	3378	66 39 41	3354	68 2 50	3333	69 26 23	3314
	Fomalhaut W.	31 20 49	3020	32 50 37	2961	34 21 38	2912	35 53 42	2870
	Jupiter W.	28 41 51	2414	30 25 5	2413	32 8 21	2413	33 51 37	2414
	Sun E.	52 8 36	2636	50 30 30	2641	48 52 31	2645	47 14 37	2651
12	α Aquilæ W.	76 28 38	3256	77 53 41	3249	79 18 52	3246	80 44 7	3243
	Fomalhaut W.	43 45 17	2735	45 21 10	2719	46 57 24	2706	48 33 56	2695
	Jupiter W.	42 27 22	2427	44 10 18	2431	45 53 8	2436	47 35 52	2441
	α Pegasi W.	30 18 30	4379	31 24 10	4189	32 32 46	4026	33 44 0	3886
	Sun E.	39 6 53	2678	37 29 43	2684	35 52 41	2691	34 15 49	2697
13	α Aquilæ W.	87 50 26	3255	89 15 30	3262	90 40 26	3271	92 5 11	3281
	Fomalhaut W.	56 39 23	2667	58 16 47	2666	59 54 13	2666	61 31 38	2666
	Jupiter W.	56 7 33	2471	57 49 27	2478	59 31 11	2485	61 12 45	2493
	α Pegasi W.	40 10 14	3427	41 32 0	3368	42 54 53	3316	44 18 46	3272
18	Sun W.	34 43 31	3207	36 9 32	3219	37 35 19	3231	39 0 52	3242
	Pollux E.	19 22 3	2876	17 49 14	2891	16 16 44	2908	14 44 35	2926
	Regulus E.	55 55 26	2877	54 22 37	2888	52 50 3	2901	51 17 45	2913
	Spica ♍ E.	109 57 51	2867	108 24 50	2878	106 52 3	2889	105 19 30	2900
19	Sun W.	46 5 13	3299	47 29 26	3309	48 53 27	3319	50 17 17	3329
	Regulus E.	43 40 3	2971	42 9 14	2983	40 38 40	2994	39 8 20	3005
	Spica ♍ E.	97 40 9	2951	96 8 55	2961	94 37 53	2970	93 7 3	2979
20	Sun W.	57 13 44	3372	58 36 33	3380	59 59 12	3386	61 21 44	3393
	Regulus E.	31 40 13	3063	30 11 18	3075	28 42 38	3087	27 14 13	3101
	Spica ♍ E.	85 35 33	3020	84 5 45	3026	82 36 5	3033	81 6 33	3040
21	Sun W.	68 12 36	3421	69 34 29	3425	70 56 17	3428	72 18 2	3431
	Venus W.	30 51 17	3514	32 11 26	3518	33 31 30	3520	34 51 32	3523
	Pollux W.	17 10 33	3076	18 39 12	3078	20 7 49	3078	21 36 26	3078
	Regulus E.	19 56 36	3188	18 30 12	3214	17 4 19	3246	15 39 4	3286
	Spica ♍ E.	73 40 43	3065	72 11 50	3069	70 43 3	3073	69 14 20	3075
22	Sun W.	79 6 5	3439	80 27 37	3439	81 49 9	3439	83 10 42	3438
	Venus W.	41 31 9	3527	42 51 3	3528	44 10 56	3526	45 30 51	3525
	Pollux W.	28 59 20	3079	30 27 55	3078	31 56 31	3078	33 25 8	3077
	Spica ♍ E.	61 51 28	3084	60 22 59	3084	58 54 30	3084	57 26 1	3084
	Antares E.	107 43 21	3075	106 14 41	3074	104 46 0	3074	103 17 19	3073
23	Sun W.	89 58 56	3424	91 20 45	3420	92 42 39	3415	94 4 38	3410
	Venus W.	52 10 58	3511	53 31 10	3506	54 51 28	3501	56 11 51	3496
	Pollux W.	40 48 50	3062	42 17 46	3057	43 46 48	3053	45 15 55	3048
	ca ♍ E.	50 3 18	3075	48 34 38	3072	47 5 54	3068	45 37 5	3064
	E.	95 53 23	3061	94 24 25	3057	92 55 23	3052	91 26 15	3048

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Sun	W.	95 26 43	3405	96 48 54	3398	98 11 13	3392	99 33 39	338[illegible]
	Venus	W.	57 32 20	3489	58 52 57	3483	60 13 40	3476	61 34 31	3468
	Pollux	W.	46 45 8	3043	48 14 27	3036	49 43 55	3030	51 13 30	3024
	Regulus	W.	11 11 47	3399	12 34 5	3318	13 57 56	3258	15 22 57	3211
	Spica ♍	E.	44 8 12	3060	42 39 14	3056	41 10 10	3051	39 41 1	3045
	Antares	E.	89 57 2	3042	88 27 41	3037	86 58 14	3031	85 28 39	3024
25	Sun	W.	106 28 4	3340	107 51 29	3331	109 15 4	3320	110 38 52	3309
	Venus	W.	68 21 7	3423	69 42 58	3412	71 5 1	3401	72 27 16	3391
	Pollux	W.	58 43 44	2983	60 14 18	2974	61 45 4	2963	63 16 3	2954
	Regulus	W.	22 39 3	3071	24 7 48	3052	25 36 57	3033	27 6 29	3016
	Spica ♍	E.	32 13 31	3017	30 43 39	3012	29 13 41	3006	27 43 35	3000
	Antares	E.	77 58 28	2984	76 27 55	2974	74 57 10	2965	73 26 13	2954
26	Sun	W.	117 41 11	3249	119 6 22	3236	120 31 49	3223	121 57 31	3209
	Venus	W.	79 21 54	3327	80 45 34	3314	82 9 29	3300	83 33 41	3285
	Pollux	W.	70 54 18	2897	72 26 41	2884	73 59 20	2872	75 32 15	2859
	Regulus	W.	34 39 17	2937	36 10 49	2921	37 42 41	2905	39 14 53	2891
	Antares	E.	65 48 8	2898	64 15 47	2887	62 43 11	2874	61 10 19	2861
	α Aquilæ	E.	111 47 1	3888	110 33 29	3856	109 19 24	3825	108 4 48	3795
27	Sun	W.	129 10 18	3136	130 37 44	3120	132 5 29	3105	133 33 33	3090
	Venus	W.	90 38 58	3209	92 4 56	3194	93 31 12	3178	94 57 48	3162
	Pollux	W.	83 21 7	2790	84 55 48	2776	86 30 47	2761	88 6 6	2747
	Regulus	W.	47 0 43	2814	48 34 53	2798	50 9 24	2783	51 44 14	2766
	Antares	E.	53 21 45	2794	51 47 9	2780	50 12 15	2765	48 37 1	2751
	α Aquilæ	E.	101 44 24	3663	100 26 58	3640	99 9 7	3617	97 50 51	3596
28	Venus	W.	102 15 43	3078	103 44 19	3062	105 13 15	3045	106 42 32	3028
	Pollux	W.	96 7 34	2671	97 44 53	2656	99 22 32	2641	101 0 32	2626
	Regulus	W.	59 43 40	2687	61 20 37	2672	62 57 55	2656	64 35 34	2640
	Antares	E.	40 36 7	2678	38 58 58	2663	37 21 28	2649	35 43 39	2634
	α Aquilæ	E.	91 14 6	3505	89 53 47	3489	88 33 10	3475	87 12 18	3462
29	Regulus	W.	72 49 12	2561	74 29 0	2547	76 9 8	2531	77 49 38	2517
	Spica ♍	W.	18 56 27	2637	20 34 32	2609	22 13 15	2584	23 52 32	2560
	Antares	E.	27 29 42	2564	25 49 58	2552	24 9 57	2540	22 29 39	2529
	α Aquilæ	E.	80 24 44	3415	79 2 44	3410	77 40 39	3407	76 18 30	3404
	Fomalhaut	E.	109 46 34	2743	108 10 51	2725	106 34 44	2707	104 58 13	2689
	Jupiter	E.	111 6 16	2582	109 26 57	2567	107 47 17	2552	106 7 16	2536
30	Regulus	W.	86 17 13	2445	87 59 44	2431	89 42 34	2419	91 25 42	2405
	Spica ♍	W.	32 16 20	2465	33 58 22	2448	35 40 48	2433	37 23 36	2418
	α Aquilæ	E.	69 27 53	3424	68 6 4	3436	66 44 28	3449	65 23 7	3465
	Fomalhaut	E.	96 49 55	2608	95 11 11	2593	93 32 7	2580	91 52 45	2567
	Jupiter	E.	97 41 59	2464	95 59 55	2450	94 17 32	2437	92 34 50	2424
31	Spica ♍	W.	46 2 43	2351	47 47 29	2339	49 32 32	2327	51 17 52	2316
	α Aquilæ	E.	58 42 13	3602	57 23 41	3643	56 5 53	3689	54 48 54	3742
	Fomalhaut	E.	83 31 37	2510	81 50 38	2501	80 9 26	2492	78 28 2	2484
	Jupiter	E.	83 56 47	2363	82 12 19	2353	80 27 36	2342	78 42 37	2332
	α Pegasi	E.	103 31 43	2726	101 55 38	2711	100 19 13	2[illegible]		

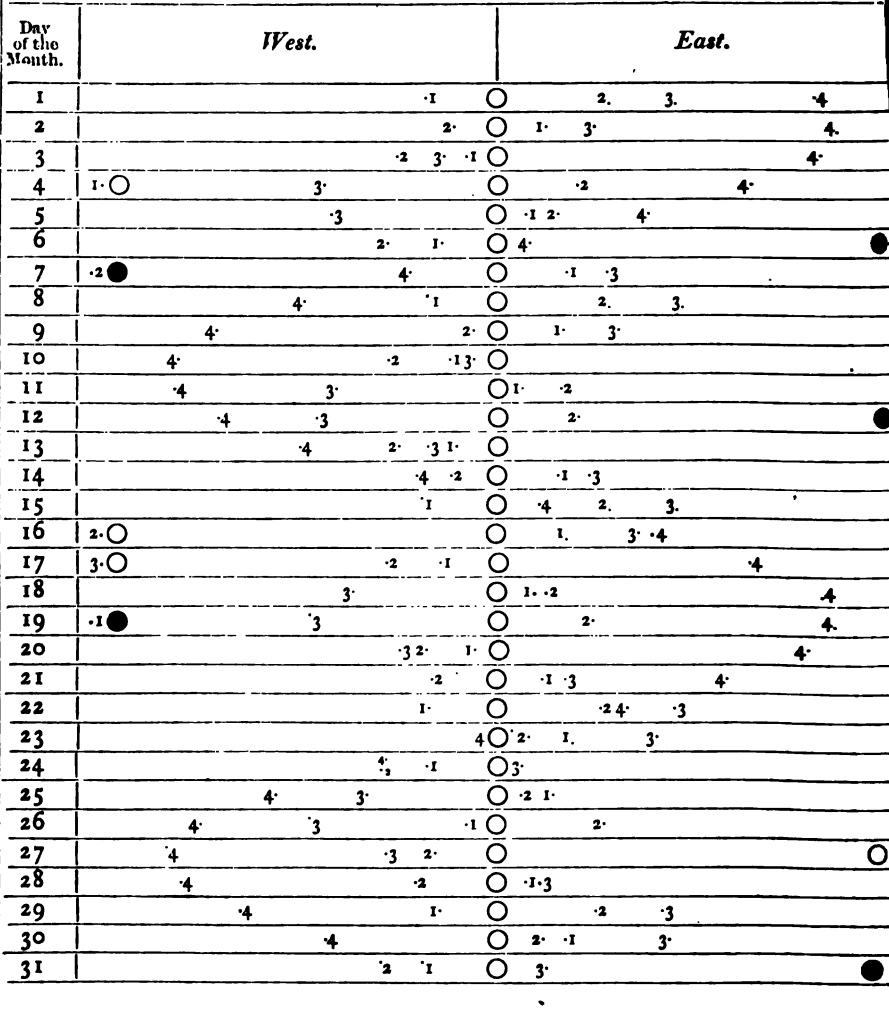
MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Sun	W.	100 56 13	3377	102 18 56	3368	103 41 49	3360	105 4 51	3351
	Venus	W.	62 55 31	3460	64 16 40	3451	65 37 59	3442	66 59 28	3433
	Pollux	W.	52 43 13	3016	54 13 6	3009	55 43 8	3001	57 13 20	2991
	Regulus	W.	16 48 53	3173	18 15 34	3143	19 42 52	3115	21 10 43	3091
	Spica ♍	E.	38 11 44	3041	36 42 22	3035	35 12 52	3029	33 43 15	3023
	Antares	E.	83 58 56	3016	82 29 3	3009	80 59 2	3001	79 28 50	2993
25	Sun	W.	112 2 53	3299	113 27 6	3287	114 51 33	3274	116 16 15	3262
	Venus	W.	73 49 43	3378	75 12 25	3366	76 35 20	3354	77 58 29	3340
	Pollux	W.	64 47 14	2943	66 18 39	2932	67 50 17	2920	69 22 10	2909
	Regulus	W.	28 36 22	2999	30 6 36	2983	31 37 10	2967	33 8 4	2952
	Spica ♍	E.	26 13 22	2996	24 43 4	2991	23 12 40	2988	21 42 12	2987
	Antares	E.	71 55 3	2944	70 23 40	2934	68 52 4	2922	67 20 13	2911
26	Sun	W.	123 23 30	3194	124 49 46	3180	126 16 19	3165	127 43 10	3151
	Venus	W.	84 58 10	3271	86 22 55	3256	87 47 58	3241	89 13 19	3225
	Pollux	W.	77 5 27	2846	78 38 55	2832	80 12 41	2818	81 46 45	2804
	Regulus	W.	40 47 24	2876	42 20 14	2860	43 53 24	2845	45 26 54	2830
	Antares	E.	59 37 10	2848	58 3 45	2835	56 30 3	2821	54 56 3	2808
	α Aquilæ	E.	106 49 41	3766	105 34 4	3739	104 17 58	3713	103 1 25	3687
27	Sun	W.	135 1 55	3074	136 30 37	3058	137 59 38	3042	139 28 59	3026
	Venus	W.	96 24 43	3145	97 51 58	3128	99 19 33	3112	100 47 28	3096
	Pollux	W.	89 41 44	2732	91 17 42	2717	92 53 59	2702	94 30 37	2687
	Regulus	W.	53 19 26	2751	54 54 58	2735	56 30 51	2720	58 7 5	2704
	Antares	E.	47 1 29	2737	45 25 38	2722	43 49 27	2707	42 12 57	2692
	α Aquilæ	E.	96 32 12	3576	95 13 12	3556	93 53 50	3538	92 34 8	3520
28	Venus	W.	108 12 10	3011	109 42 9	2994	111 12 29	2978	112 43 9	2961
	Pollux	W.	102 38 52	2610	104 17 34	2594	105 56 37	2580	107 36 0	2564
	Regulus	W.	66 13 35	2624	67 51 57	2608	69 30 41	2593	71 9 46	2577
	Antares	E.	34 5 30	2620	32 27 2	2605	30 48 14	2591	29 9 7	2578
	α Aquilæ	E.	85 51 11	3450	84 29 51	3439	83 8 18	3430	81 46 35	3422
29	Regulus	W.	79 30 28	2502	81 11 39	2487	82 53 10	2472	84 35 2	2459
	Spica ♍	W.	25 32 22	2539	27 12 41	2519	28 53 28	2500	30 34 41	2482
	Antares	E.	20 49 6	2518	19 8 18	2509	17 27 18	2503	15 46 9	2500
	α Aquilæ	E.	74 56 18	3404	73 34 6	3407	72 11 57	3410	70 49 52	3415
	Fomalhaut	E.	103 21 18	2672	101 44 0	2655	100 6 20	2639	98 28 18	2623
	Jupiter	E.	104 26 53	2522	102 46 11	2507	101 5 7	2492	99 23 43	2478
30	Regulus	W.	93 9 9	2392	94 52 55	2381	96 36 57	2369	98 21 17	2357
	Spica ♍	W.	39 6 45	2403	40 50 15	2389	42 34 5	2375	44 18 15	2363
	α Aquilæ	E.	64 2 4	3485	62 41 23	3509	61 21 9	3535	60 1 24	3566
	Fomalhaut	E.	90 13 5	2554	88 33 7	2542	86 52 52	2531	85 12 22	2520
	Jupiter	E.	90 51 49	2411	89 8 30	2398	87 24 53	2387	85 40 59	2374
31	Spica ♍	W	53 3 28	2306	54 49 19	2296	56 35 24	2287	58 21 43	2278
	α Aquilæ	E.	53 32 51	3800	52 17 49	3866	51 3 55	3941	49 51 17	4025
	Fomalhaut	E.	76 46 27	2477	75 4 42	2472	73 22 49	2466	71 40 48	2462
	Jupiter	E.	76 57 24	2322	75 11 56	2313	73 26 15	2304	71 40 21	2296
	α Pegasi	E.	97 5 23	2670	95 28 3	2658	93 50 26	2648	92 12 36	2638

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 15^h, Mean Time.



This Table represents, at 15^h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by th on the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or ^{h} Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d.418488$. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	−1·1503	−1·1271	+8·8727	−0·8341	21 21 5·68	39	120	·329
2	1·1438	1·1354	8·8891	0·8333	21 17 9·77	40	121	·331
3	1·1371	1·1434	8·9050	0·8325	21 13 13·86	41	122	·334
4	−1·1301	−1·1512	+8·9205	−0·8317	21 9 17·95	42	123	·337
5	1·1229	1·1587	8·9357	0·8309	21 5 22·04	43	124	·339
6	1·1155	1·1659	8·9505	0·8300	21 1 26·13	44	125	·342
7	−1·1078	−1·1729	+8·9649	−0·8292	20 57 30·22	45	126	·345
8	1·0999	1·1797	8·9790	0·8284	20 53 34·31	46	127	·348
9	1·0917	1·1862	8·9927	0·8276	20 49 38·40	47	128	·350
10	−1·0832	−1·1925	+9·0062	−0·8268	20 45 42·49	48	129	·353
11	1·0744	1·1986	9·0193	0·8260	20 41 46·58	49	130	·356
12	1·0653	1·2045	9·0322	0·8252	20 37 50·67	50	131	·359
13	−1·0559	−1·2102	+9·0449	−0·8244	20 33 54·76	51	132	·361
14	1·0462	1·2157	9·0573	0·8236	20 29 58·85	52	133	·364
15	1·0361	1·2210	9·0694	0·8228	20 26 2·94	53	134	·367
16	−1·0257	−1·2261	+9·0813	−0·8221	20 22 7·02	54	135	·370
17	1·0149	1·2310	9·0929	0·8213	20 18 11·11	55	136	·372
18	1·0037	1·2357	9·1044	0·8206	20 14 15·20	56	137	·375
19	−0·9920	−1·2403	+9·1156	−0·8199	20 10 19·29	57	138	·378
20	0·9800	1·2447	9·1267	0·8192	20 6 23·38	58	139	·381
21	0·9674	1·2490	9·1375	0·8185	20 2 27·47	59	140	·383
22	−0·9544	−1·2530	+9·1483	−0·8178	19 58 31·56	60	141	·386
23	0·9408	1·2569	9·1587	0·8172	19 54 35·64	61	142	·389
24	0·9267	1·2607	9·1690	0·8166	19 50 39·73	62	143	·392
25	−0·9120	−1·2643	+9·1791	−0·8160	19 46 43·82	63	144	·394
26	0·8967	1·2677	9·1891	0·8154	19 42 47·91	64	145	·397
27	0·8807	1·2710	9·1989	0·8149	19 38 52·00	65	146	·400
28	−0·8639	−1·2742	+9·2085	−0·8144	19 34 56·09	66	147	·402
29	0·8464	1·2772	9·2180	0·8139	19 31 0·17	67	148	·405
30	0·8279	1·2801	9·2273	0·8134	19 27 4·26	68	149	·408
31	0·8086	1·2828	9·2365	0·8130	19 23 8·35	69	150	·411
	−0·7882	−1·2854	+9·2455	−0·8126	19 19 12·44	70	151	·413

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be subt. from* / *added to Apparent Time.*	Diff. for 1 hour.
		h m s	s	° ′ ″	″	m s	m s	s
Frid.	1	4 35 2·55	10·228	N.22 1 24·4	20·23	1 8·38	2 34·18	0·371
Sat.	2	4 39 8·03	10·245	22 9 29·9	19·27	1 8·44	2 25·27	0·388
Sun.	3	4 43 13·91	10·261	22 17 12·3	18·30	1 8·49	2 15·97	0·404
Mon.	4	4 47 20·18	10·277	22 24 31·5	17·32	1 8·54	2 6·28	0·419
Tues.	5	4 51 26·84	10·292	22 31 27·3	16·34	1 8·59	1 56·21	0·434
Wed.	6	4 55 33·84	10·306	22 37 59·5	15·35	1 8·64	1 45·79	0·448
Thur.	7	4 59 41·19	10·319	22 44 8·0	14·36	1 8·68	1 35·03	0·461
Frid.	8	5 3 48·85	10·332	22 49 52·7	13·36	1 8·72	1 23·96	0·474
Sat.	9	5 7 56·82	10·344	22 55 13·4	12·35	1 8·75	1 12·58	0·486
Sun.	10	5 12 5·07	10·354	23 0 9·9	11·34	1 8·79	1 0·92	0·497
Mon.	11	5 16 13·58	10·364	23 4 42·2	10·33	1 8·82	0 49·00	0·506
Tues.	12	5 20 22·32	10·373	23 8 50·2	9·31	1 8·85	0 36·85	0·514
Wed.	13	5 24 31·27	10·380	23 12 33·8	8·29	1 8·88	0 24·49	0·522
Thur.	14	5 28 40·39	10·386	23 15 52·7	7·27	1 8·90	0 11·96	0·529
Frid.	15	5 32 49·67	10·392	23 18 47·1	6·24	1 8·92	0 0·72	0·534
Sat.	16	5 36 59·07	10·396	23 21 16·8	5·21	1 8·93	0 13·53	0·538
Sun.	17	5 41 8·58	10·399	23 23 21·6	4·17	1 8·95	0 26·43	0·541
Mon.	18	5 45 18·15	10·401	23 25 1·7	3·14	1 8·96	0 39·42	0·543
Tues.	19	5 49 27·77	10·402	23 26 17·0	2·10	1 8·96	0 52·44	0·544
Wed.	20	5 53 37·41	10·401	23 27 7·4	1·07	1 8·97	1 5·49	0·543
Thur.	21	5 57 47·04	10·400	23 27 33·0	0·03	1 8·97	1 18·52	0·541
Frid.	22	6 1 56·63	10·398	23 27 33·7	1·00	1 8·96	1 31·51	0·539
Sat.	23	6 6 6·16	10·394	23 27 9·6	2·04	1 8·96	1 44·46	0·536
Sun.	24	6 10 15·61	10·389	23 26 20·8	3·07	1 8·95	1 57·32	0·532
Mon.	25	6 14 24·96	10·384	23 25 7·1	4·10	1 8·93	2 10·07	0·526
Tues.	26	6 18 34·19	10·378	23 23 28·7	5·13	1 8·92	2 22·70	0·520
Wed.	27	6 22 43·28	10·372	23 21 25·7	6·16	1 8·90	2 35·20	0·514
Thur.	28	6 26 52·20	10·364	23 18 58·1	7·18	1 8·88	2 47·53	0·507
Frid.	29	6 31 0·93	10·356	23 16 5·9	8·20	1 8·85	2 59·68	0·498
Sat.	30	6 35 9·47	10·346	23 12 49·4	9·21	1 8·82	3 11·62	0·488
Sun.	31	6 39 17·78		N.23 9 8·4		1 8·79	3 23·34	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ˢ·19 from the *Sidereal* Time.

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be added to* / *subt. from Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Frid.	1	4 35 2·98	N.22 1 25·3	15 48·2	2 34·16	4 37 37·14
Sat.	2	4 39 8·44	22 9 30·7	15 48·1	2 25·25	4 41 33·69
Sun.	3	4 43 14·30	22 17 13·0	15 47·9	2 15·95	4 45 30·25
Mon.	4	4 47 20·55	22 24 32·1	15 47·8	2 6·26	4 49 26·81
Tues.	5	4 51 27·17	22 31 27·8	15 47·6	1 56·20	4 53 23·37
Wed.	6	4 55 34·15	22 37 59·9	15 47·5	1 45·78	4 57 19·93
Thur.	7	4 59 41·46	22 44 8·4	15 47·4	1 35·02	5 1 16·48
Frid.	8	5 3 49·09	22 49 53·0	15 47·3	1 23·95	5 5 13·04
Sat.	9	5 7 57·03	22 55 13·6	15 47·2	1 12·57	5 9 9·60
Sun.	10	5 12 5·25	23 0 10·1	15 47·1	1 0·91	5 13 6·16
Mon.	11	5 16 13·72	23 4 42·4	15 47·0	0 49·00	5 17 2·72
Tues.	12	5 20 22·43	23 8 50·3	15 46·9	0 36·85	5 20 59·28
Wed.	13	5 24 31·34	23 12 33·8	15 46·8	0 24·49	5 24 55·83
Thur.	14	5 28 40·43	23 15 52·8	15 46·7	0 11·96	5 28 52·39
Frid.	15	5 32 49·67	23 18 47·1	15 46·6	0 0·72	5 32 48·95
Sat.	16	5 36 59·04	23 21 16·7	15 46·5	0 13·53	5 36 45·51
Sun.	17	5 41 8·50	23 23 21·6	15 46·5	0 26·43	5 40 42·07
Mon.	18	5 45 18·04	23 25 1·7	15 46·4	0 39·41	5 44 38·63
Tues.	19	5 49 27·62	23 26 17·0	15 46·4	0 52·43	5 48 35·19
Wed.	20	5 53 37·22	23 27 7·4	15 46·3	1 5·48	5 52 31·74
Thur.	21	5 57 46·81	23 27 33·0	15 46·3	1 18·51	5 56 28·30
Frid.	22	6 1 56·36	23 27 33·8	15 46·2	1 31·50	6 0 24·86
Sat.	23	6 6 5·86	23 27 9·7	15 46·2	1 44·44	6 4 21·42
Sun.	24	6 10 15·28	23 26 20·9	15 46·1	1 57·30	6 8 17·98
Mon.	25	6 14 24·59	23 25 7·2	15 46·1	2 10·05	6 12 14·54
Tues.	26	6 18 33·78	23 23 28·9	15 46·1	2 22·68	6 16 11·10
Wed.	27	6 22 42·83	23 21 25·9	15 46·1	2 35·18	6 20 7·66
Thur.	28	6 26 51·72	23 18 58·4	15 46·0	2 47·51	6 24 4·21
Frid.	29	6 31 0·42	23 16 6·4	15 46·0	2 59·65	6 28 0·77
Sat.	30	6 35 8·92	23 12 49·9	15 46·0	3 11·59	6 31 57·33
Sun.	31	6 39 17·20	N.23 9 9·0	15 46·0	3 23·31	6 35 53·89

* The Semi

Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax. *Noon.*	THE MOON'S Horizontal Parallax. *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	70 22 43·2	S. 0·32	0·0062108	16 10·6	16 13·9	59 14·9	59 27·0
2	71 20 9·0	0·40	0·0062728	16 16·5	16 18·3	59 36·5	59 43·3
3	72 17 34·0	0·45	0·0063335	16 19·4	16 19·8	59 47·3	59 48·7
4	73 14 58·4	0·48	0·0063930	16 19·5	16 18·5	59 47·5	59 44·0
5	74 12 22·1	0·48	0·0064510	16 17·0	16 15·0	59 38·4	59 31·1
6	75 9 45·2	0·44	0·0065074	16 12·6	16 9·9	59 22·3	59 12·3
7	76 7 7·7	0·38	0·0065621	16 6·8	16 3·6	59 1·2	58 49·3
8	77 4 29·7	0·29	0·0066148	16 0·2	15 56·6	58 36·8	58 23·8
9	78 1 51·2	0·17	0·0066656	15 53·0	15 49·2	58 10·3	57 56·4
10	78 59 12·3	S. 0·05	0·0067141	15 45·3	15 41·4	57 42·2	57 27·8
11	79 56 32·9	N. 0·08	0·0067604	15 37·4	15 33·3	57 13·2	56 58·3
12	80 53 52·9	0·23	0·0068043	15 29·2	15 25·0	56 43·2	56 28·0
13	81 51 12·5	0·36	0·0068457	15 20·9	15 16·8	56 12·9	55 58·0
14	82 48 31·5	0·47	0·0068847	15 12·8	15 8·9	55 43·3	55 29·1
15	83 45 49·9	0·58	0·0069212	15 5·2	15 1·7	55 15·5	55 2·7
16	84 43 7·7	0·66	0·0069549	14 58·5	14 55·6	54 50·8	54 40·2
17	85 40 24·9	0·70	0·0069861	14 53·1	14 50·9	54 30·9	54 23·0
18	86 37 41·5	0·73	0·0070148	14 49·2	14 48·0	54 16·8	54 12·5
19	87 34 57·4	0·72	0·0070412	14 47·4	14 47·4	54 10·3	54 10·2
20	88 32 12·7	0·68	0·0070652	14 48·0	14 49·3	54 12·5	54 17·1
21	89 29 27·3	0·62	0·0070870	14 51·2	14 53·9	54 24·2	54 33·8
22	90 26 41·2	0·52	0·0071066	14 57·2	15 1·2	54 46·0	55 0·7
23	91 23 54·4	0·41	0·0071243	15 5·8	15 11·1	55 17·7	55 36·9
24	92 21 7·1	0·29	0·0071400	15 16·9	15 23·2	55 58·2	56 21·3
25	93 18 19·3	0·15	0·0071540	15 29·9	15 36·9	56 46·0	57 11·7
26	94 15 31·1	N. 0·02	0·0071662	15 44·2	15 51·4	57 38·1	58 4·5
27	95 12 42·4	S. 0·09	0·0071769	15 58·5	16 5·3	58 30·5	58 55·5
28	96 9 53·4	0·20	0·0071863	16 11·7	16 17·5	59 18·9	59 40·1
29	97 7 4·2	0·29	0·0071941	16 22·5	16 26·8	59 58·7	60 14·1
30	98 4 14·8	0·35	0·0072005	16 30·0	16 32·2	60 26·1	60 34·2
31	99 1 25·4	S. 0·38	0·0072053	16 33·4	16 33·5	60 38·4	60 38·7

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Frid.	1	262 1 20·6	269 10 33·3	S. 3 18 29·2	S. 3 47 0·9	16·4	13 20·1
Sat.	2	276 22 38·3	283 36 51·3	4 12 6·8	4 33 17·5	17·4	14 23·8
Sun.	3	290 52 26·5	298 8 37·6	4 50 8·3	5 2 20·0	18·4	15 26·4
Mon.	4	305 24 40·4	312 39 53·5	5 9 39·6	5 12 1·0	19·4	16 25·6
Tues.	5	319 53 39·9	327 5 27·7	5 9 24·6	5 1 55·8	20·4	17 20·5
Wed.	6	334 14 50·5	341 21 27·7	4 49 47·2	4 33 14·9	21·4	18 11·3
Thur.	7	348 25 3·7	355 25 27·8	4 12 40·2	3 48 26·6	22·4	18 59·4
Frid.	8	2 22 34·0	9 16 19·4	3 21 1·6	2 50 53·6	23·4	19 45·9
Sat.	9	16 6 43·8	22 53 48·9	2 18 33·0	1 44 30·7	24·4	20 32·2
Sun.	10	29 37 37·7	36 18 13·6	S. 1 9 18·1	S. 0 33 26·2	25·4	21 19·6
Mon.	11	42 55 40·0	49 30 0·1	N. 0 2 34·0	N. 0 38 13·7	26·4	22 8·8
Tues.	12	56 1 16·4	62 29 31·4	1 13 4·3	1 46 39·5	27·4	23 0·2
Wed.	13	68 54 46·3	75 17 2·5	2 18 35·0	2 48 29·0	28·4	23 53·4
Thur.	14	81 36 21·8	87 52 46·1	3 16 2·1	3 40 57·4	29·4	d
Frid.	15	94 6 18·3	100 17 3·2	4 3 1·1	4 22 1·8	0·9	0 47·4
Sat.	16	106 25 7·0	112 30 38·5	4 37 51·0	4 50 22·6	1·9	1 40·5
Sun.	17	118 33 48·9	124 34 52·5	4 59 32·8	5 5 20·0	2·9	2 31·6
Mon.	18	130 34 6·2	136 31 49·9	5 7 43·7	5 6 45·8	3·9	3 19·8
Tues.	19	142 28 26·5	148 24 21·7	5 2 29·4	4 54 58·2	4·9	4 4·9
Wed.	20	154 20 4·0	160 16 3·7	4 44 17·1	4 30 32·1	5·9	4 47·5
Thur.	21	166 12 54·2	172 11 9·8	4 13 49·7	3 54 17·6	6·9	5 28·4
Frid.	22	178 11 26·8	184 14 22·1	3 32 4·1	3 7 18·5	7·9	6 8·6
Sat.	23	190 20 33·5	196 30 37·7	2 40 11·9	2 10 56·7	8·9	6 49·2
Sun.	24	202 45 11·2	209 4 48·4	1 39 47·3	N. 1 7 0·2	9·9	7 31·5
Mon.	25	215 30 0·2	222 1 13·6	N. 0 32 54·9	S. 0 2 6·3	10·9	8 16·9
Tues.	26	228 38 50·5	235 23 5·3	S. 0 37 38·0	1 13 11·9	11·9	9 6·6
Wed.	27	242 14 4·8	249 11 46·1	1 48 15·3	2 22 14·0	12·9	10 1·7
Thur.	28	256 15 55·9	263 26 10·0	2 54 31·1	3 24 28·8	13·9	11 2·2
Frid.	29	270 41 52·7	278 2 18·0	3 51 29·4	4 14 56·8	14·9	12 6·5
Sat.	30	285 26 30·4	292 53 26·8	4 34 19·1	4 49 8·6	15·9	13 11·6
Sun.	31	300 21 59·5	307 50 58·7	S. 4 59 5·2	S. 5 3 55·0	16·9	14 14·3

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 1.		
	h m s	° ′ ″	″
0	17 24 22·05	S. 26 31 17·6	46·07
1	17 27 0·22	26 35 54·0	44·27
2	17 29 38·70	26 40 19·6	42·47
3	17 32 17·46	26 44 34·4	40·63
4	17 34 56·51	26 48 38·2	38·80
5	17 37 35·84	26 52 31·0	36·97
6	17 40 15·44	26 56 12·8	35·10
7	17 42 55·29	26 59 43·4	33·23
8	17 45 35·38	27 3 2·8	31·37
9	17 48 15·71	27 6 11·0	29·47
10	17 50 56·27	27 9 7·8	27·58
11	17 53 37·05	27 11 53·3	25·68
12	17 56 18·03	27 14 27·4	23·77
13	17 58 59·21	27 16 50·0	21·85
14	18 1 40·57	27 19 1·1	19·92
15	18 4 22·11	27 21 0·6	18·00
16	18 7 3·80	27 22 48·6	16·05
17	18 9 45·65	27 24 24·9	14·10
18	18 12 27·64	27 25 49·5	12·17
19	18 15 9·75	27 27 2·5	10·20
20	18 17 51·98	27 28 3·7	8·25
21	18 20 34·32	27 28 53·2	6·28
22	18 23 16·76	27 29 30·9	4·33
23	18 25 59·28	S. 27 29 56·9	2·33
	SATURDAY 2.		
0	18 28 41·87	S. 27 30 11·0	0·38
1	18 31 24·52	27 30 13·3	1·60
2	18 34 7·22	27 30 3·7	3·57
3	18 36 49·95	27 29 42·3	5·53
4	18 39 32·71	27 29 9·1	7·52
5	18 42 15·49	27 28 24·0	9·50
6	18 44 58·26	27 27 27·0	11·47
7	18 47 41·03	27 26 18·2	13·43
8	18 50 23·78	27 24 57·6	15·42
9	18 53 6·49	27 23 25·1	17·38
10	18 55 49·16	27 21 40·8	19·35
11	18 58 31·77	27 19 44·7	21·32
12	19 1 14·32	27 17 36·8	23·28
13	19 3 56·79	27 15 17·1	25·23
14	19 6 39·16	27 12 45·7	27·20
15	19 9 21·44	27 10 2·5	29·15
16	19 12 3·61	27 7 7·6	31·08
17	19 14 45·65	27 4 1·1	33·03
18	19 17 27·56	27 0 42·9	34·95
19	19 20 9·33	26 57 13·2	36·88
20	19 22 50·94	26 53 31·9	38·80
21	19 25 32·39	26 49 39·1	40·72
22	19 28 13·67	26 45 34·8	42·62
23	19 30 54·76	26 41 19·1	44·52
24	19 33 35·66	S. 26 36 52·0	

Hour.	Right Ascension.	Declination.	Diff. for
	SUNDAY 3.		
	h m s	° ′ ″	
0	19 33 35·66	S. 26 36 52·0	46
1	19 36 16·35	26 32 13·6	48
2	19 38 56·82	26 27 23·9	50
3	19 41 37·07	26 22 23·0	52
4	19 44 17·09	26 17 11·0	53
5	19 46 56·87	26 11 47·9	55
6	19 49 36·40	26 6 13·7	57
7	19 52 15·67	26 0 28·6	59
8	19 54 54·67	25 54 32·6	61
9	19 57 33·40	25 48 25·8	62
10	20 0 11·84	25 42 8·3	64
11	20 2 49·99	25 35 40·1	66
12	20 5 27·85	25 29 1·2	68
13	20 8 5·40	25 22 11·8	69
14	20 10 42·64	25 15 12·0	71
15	20 13 19·55	25 8 1·9	73
16	20 15 56·14	25 0 41·4	75
17	20 18 32·40	24 53 10·8	76
18	20 21 8·32	24 45 30·1	78
19	20 23 43·90	24 37 39·4	80
20	20 26 19·13	24 29 38·7	81
21	20 28 54·00	24 21 28·2	83
22	20 31 28·51	24 13 8·0	84
23	20 34 2·66	S. 24 4 38·1	86
	MONDAY 4.		
0	20 36 36·43	S. 23 55 58·7	88
1	20 39 9·83	23 47 9·8	89
2	20 41 42·85	23 38 11·6	91
3	20 44 15·49	23 29 4·1	92
4	20 46 47·74	23 19 47·5	94
5	20 49 19·61	23 10 21·8	95
6	20 51 51·08	23 0 47·1	97
7	20 54 22·16	22 51 3·6	98
8	20 56 52·83	22 41 11·3	100
9	20 59 23·11	22 31 10·4	101
10	21 1 52·98	22 21 1·0	102
11	21 4 22·45	22 10 43·1	104
12	21 6 51·51	22 0 16·8	105
13	21 9 20·16	21 49 42·3	107
14	21 11 48·40	21 38 59·8	108
15	21 14 16·23	21 28 9·2	109
16	21 16 43·64	21 17 10·7	111
17	21 19 10·64	21 6 4·4	112
18	21 21 37·23	20 54 50·4	113
19	21 24 3·40	20 43 28·8	114
20	21 26 29·16	20 31 59·7	116
21	21 28 54·50	20 20 22·	
22	21 31 19·43	20 8	
23	21 33 43·94	19 56	
24	21 36 8·04	S. 19	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 5.		
	h m s	° ′ ″	″
0	21 36 8·04	S. 19 44 50·9	120·80
1	21 38 31·73	19 32 46·1	121·95
2	21 40 55·00	19 20 34·4	123·05
3	21 43 17·86	19 8 16·1	124·17
4	21 45 40·31	18 55 51·1	125·23
5	21 48 2·35	18 43 19·7	126·32
6	21 50 23·98	18 30 41·8	127·35
7	21 52 45·21	18 17 57·7	128·37
8	21 55 6·04	18 5 7·5	129·38
9	21 57 26·46	17 52 11·2	130·38
10	21 59 46·49	17 39 8·9	131·37
11	22 2 6·12	17 26 0·7	132·30
12	22 4 25·35	17 12 46·9	133·23
13	22 6 44·19	16 59 27·5	134·17
14	22 9 2·64	16 46 2·5	135·07
15	22 11 20·71	16 32 32·1	135·93
16	22 13 38·39	16 18 56·5	136·82
17	22 15 55·69	16 5 15·6	137·67
18	22 18 12·62	15 51 29·6	138·48
19	22 20 29·17	15 37 38·7	139·32
20	22 22 45·35	15 23 42·8	140·10
21	22 25 1·16	15 9 42·2	140·88
22	22 27 16·61	14 55 36·9	141·63
23	22 29 31·69	S. 14 41 27·1	142·40
	WEDNESDAY 6.		
0	22 31 46·42	S. 14 27 12·7	143·12
1	22 34 0·79	14 12 54·0	143·83
2	22 36 14·82	13 58 31·0	144·52
3	22 38 28·50	13 44 3·9	145·20
4	22 40 41·85	13 29 32·7	145·87
5	22 42 54·85	13 14 57·5	146·50
6	22 45 7·52	13 0 18·5	147·13
7	22 47 19·87	12 45 35·7	147·75
8	22 49 31·89	12 30 49·2	148·33
9	22 51 43·59	12 15 59·2	148·90
10	22 53 54·98	12 1 5·8	149·48
11	22 56 6·06	11 46 8·9	150·02
12	22 58 16·83	11 31 8·8	150·55
13	23 0 27·30	11 16 5·5	151·05
14	23 2 37·48	11 0 59·2	151·55
15	23 4 47·37	10 45 49·9	152·03
16	23 6 56·97	10 30 37·7	152·50
17	23 9 6·28	10 15 22·7	152·95
18	23 11 15·32	10 0 5·0	153·38
19	23 13 24·09	9 44 44·7	153·80
20	23 15 32·59	9 29 21·9	154·20
21	23 17 40·83	9 13 56·7	154·60
	48·81	8 58 29·1	154·97
	54	8 42 59·3	155·33
		S. 8 27 27·3	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 7.		
	h m s	° ′ ″	″
0	23 24 4·02	S. 8 27 27·3	155·67
1	23 26 11·26	8 11 53·3	156·02
2	23 28 18·26	7 56 17·2	156·32
3	23 30 25·03	7 40 39·3	156·60
4	23 32 31·58	7 24 59·7	156·90
5	23 34 37·91	7 9 18·3	157·18
6	23 36 44·02	6 53 35·2	157·42
7	23 38 49·92	6 37 50·7	157·67
8	23 40 55·61	6 22 4·7	157·90
9	23 43 1·10	6 6 17·3	158·10
10	23 45 6·40	5 50 28·7	158·30
11	23 47 11·51	5 34 38·9	158·48
12	23 49 16·43	5 18 48·0	158·65
13	23 51 21·18	5 2 56·1	158·82
14	23 53 25·75	4 47 3·2	158·95
15	23 55 30·16	4 31 9·5	159·07
16	23 57 34·40	4 15 15·1	159·20
17	23 59 38·49	3 59 19·9	159·28
18	0 1 42·42	3 43 24·2	159·38
19	0 3 46·21	3 27 27·9	159·47
20	0 5 49·86	3 11 31·1	159·52
21	0 7 53·37	2 55 34·0	159·55
22	0 9 56·75	2 39 36·7	159·60
23	0 12 0·00	S. 2 23 39·1	159·62
	FRIDAY 8.		
0	0 14 3·13	S. 2 7 41·4	159·63
1	0 16 6·15	1 51 43·6	159·62
2	0 18 9·05	1 35 45·9	159·60
3	0 20 11·86	1 19 48·3	159·57
4	0 22 14·56	1 3 50·9	159·53
5	0 24 17·17	0 47 53·7	159·47
6	0 26 19·69	0 31 56·9	159·40
7	0 28 22·13	0 16 0·5	159·32
8	0 30 24·49	S. 0 0 4·6	159·22
9	0 32 26·78	N. 0 15 50·7	159·10
10	0 34 29·00	0 31 45·3	159·00
11	0 36 31·16	0 47 39·3	158·85
12	0 38 33·25	1 3 32·4	158·70
13	0 40 35·29	1 19 24·6	158·55
14	0 42 37·29	1 35 15·9	158·38
15	0 44 39·25	1 51 6·2	158·20
16	0 46 41·17	2 6 55·4	157·98
17	0 48 43·05	2 22 43·3	157·80
18	0 50 44·91	2 38 30·1	157·57
19	0 52 46·75	2 54 15·5	157·33
20	0 54 48·57	3 9 59·5	157·08
21	0 56 50·38	3 25 42·0	156·83
22	0 58 52·18	3 41 23·0	156·55
23	1 0 53·97	3 57 2·3	156·28
24	1 2 55·77	N. 4 12 40·0	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 9.				*MONDAY* 11.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	1 2 55·77	N. 4 12 40·0	155·98	0	2 41 50·34	N.15 46 22·8	128
1	1 4 57·58	4 28 15·9	155·68	1	2 43 57·35	15 59 10·9	127
2	1 6 59·40	4 43 50·0	155·35	2	2 46 4·54	16 11 53·9	126
3	1 9 1·23	4 59 22·1	155·03	3	2 48 11·92	16 24 31·6	125
4	1 11 3·09	5 14 52·3	154·68	4	2 50 19·50	16 37 4·0	124
5	1 13 4·97	5 30 20·4	154·33	5	2 52 27·26	16 49 31·1	123
6	1 15 6·88	5 45 46·4	153·97	6	2 54 35·22	17 1 52·6	122
7	1 17 8·83	6 1 10·2	153·58	7	2 56 43·38	17 14 8·7	121
8	1 19 10·82	6 16 31·7	153·20	8	2 58 51·74	17 26 19·2	120
9	1 21 12·85	6 31 50·9	152·80	9	3 1 0·30	17 38 24·1	119
10	1 23 14·93	6 47 7·7	152·38	10	3 3 9·05	17 50 23·2	118
11	1 25 17·06	7 2 22·0	151·95	11	3 5 18·01	18 2 16·6	117
12	1 27 19·25	7 17 33·7	151·52	12	3 7 27·17	18 14 4·1	116
13	1 29 21·50	7 32 42·8	151·07	13	3 9 36·54	18 25 45·7	115
14	1 31 23·83	7 47 49·2	150·62	14	3 11 46·11	18 37 21·4	114
15	1 33 26·22	8 2 52·9	150·13	15	3 13 55·89	18 48 51·0	113
16	1 35 28·69	8 17 53·7	149·65	16	3 16 5·88	19 0 14·5	112
17	1 37 31·23	8 32 51·6	149·15	17	3 18 16·08	19 11 31·8	111
18	1 39 33·86	8 47 46·5	148·65	18	3 20 26·48	19 22 43·0	110
19	1 41 36·58	9 2 38·4	148·12	19	3 22 37·10	19 33 47·8	109
20	1 43 39·39	9 17 27·1	147·60	20	3 24 47·92	19 44 46·3	108
21	1 45 42·30	9 32 12·7	147·05	21	3 26 58·96	19 55 38·4	107
22	1 47 45·31	9 46 55·0	146·48	22	3 29 10·20	20 6 24·1	106
23	1 49 48·42	N.10 1 33·9	145·93	23	3 31 21·66	N.20 17 3·2	105
	SUNDAY 10.				*TUESDAY* 12.		
0	1 51 51·63	N.10 16 9·5	145·35	0	3 33 33·33	N.20 27 35·7	104
1	1 53 54·96	10 30 41·6	144·77	1	3 35 45·21	20 38 1·6	103
2	1 55 58·40	10 45 10·2	144·15	2	3 37 57·30	20 48 20·8	102
3	1 58 1·96	10 59 35·1	143·55	3	3 40 9·59	20 58 33·2	100
4	2 0 5·65	11 13 56·4	142·92	4	3 42 22·10	21 8 38·7	99
5	2 2 9·47	11 28 13·9	142·28	5	3 44 34·81	21 18 37·4	98
6	2 4 13·41	11 42 27·6	141·65	6	3 46 47·74	21 28 29·2	97
7	2 6 17·49	11 56 37·5	140·97	7	3 49 0·87	21 38 13·9	96
8	2 8 21·71	12 10 43·3	140·32	8	3 51 14·20	21 47 51·6	95
9	2 10 26·06	12 24 45·2	139·62	9	3 53 27·74	21 57 22·2	93
10	2 12 30·56	12 38 42·9	138·93	10	3 55 41·49	22 6 45·6	92
11	2 14 35·21	12 52 36·5	138·22	11	3 57 55·44	22 16 1·9	91
12	2 16 40·01	13 6 25·8	137·50	12	4 0 9·59	22 25 10·8	90
13	2 18 44·96	13 20 10·8	136·78	13	4 2 23·94	22 34 12·4	89
14	2 20 50·06	13 33 51·5	136·03	14	4 4 38·49	22 43 6·6	87
15	2 22 55·33	13 47 27·7	135·28	15	4 6 53·23	22 51 53·4	86
16	2 25 0·76	14 0 59·4	134·53	16	4 9 8·16	23 0 32·7	85
17	2 27 6·35	14 14 26·6	133·75	17	4 11 23·29	23 9 4·5	84
18	2 29 12·11	14 27 49·1	132·95	18	4 13 38·61	23 17 28·7	82
19	2 31 18·04	14 41 6·8	132·17	19	4 15 54·12	23 25 45·2	81
20	2 33 24·14	14 54 19·8	131·37	20	4 18 9·81	23 33 54·1	80
21	2 35 30·42	15 7 28·0	130·55	21	4 20 25·69	23 41 55·2	78
22	2 37 36·88	15 20 31·3	129·70	22	4 22 41·75	23 49 48·6	77
23	2 39 43·52	15 33 29·5	128·88	23	4 24 57·98	23 57 34·1	76
24	2 41 50·34	N.15 46 22·8		24	4 27 14·39	N.24 5 11·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 13.				*FRIDAY* 15.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	4 27 14·39	N.24 5 11·8	74·97	0	6 18 27·63	N.27 26 40·2	6·47
1	4 29 30·97	24 12 41·6	73·63	1	6 20 47·20	27 27 19·0	5·00
2	4 31 47·72	24 20 3·4	72·30	2	6 23 6·69	27 27 49·0	3·55
3	4 34 4·64	24 27 17·2	70·97	3	6 25 26·11	27 28 10·3	2·12
4	4 36 21·72	24 34 23·0	69·62	4	6 27 45·44	27 28 23·0	0·65
5	4 38 38·96	24 41 20·7	68·27	5	6 30 4·67	27 28 26·9	0·78
6	4 40 56·36	24 48 10·3	66·90	6	6 32 23·81	27 28 22·2	2·22
7	4 43 13·91	24 54 51·7	65·55	7	6 34 42·86	27 28 8·9	3·67
8	4 45 31·60	25 1 25·0	64·17	8	6 37 1·80	27 27 46·9	5·10
9	4 47 49·44	25 7 50·0	62·80	9	6 39 20·62	27 27 16·3	6·53
10	4 50 7·42	25 14 6·8	61·40	10	6 41 39·33	27 26 37·1	7·95
11	4 52 25·54	25 20 15·2	60·02	11	6 43 57·91	27 25 49·4	9·38
12	4 54 43·79	25 26 15·3	58·62	12	6 46 16·36	27 24 53·1	10·80
13	4 57 2·17	25 32 7·0	57·23	13	6 48 34·67	27 23 48·3	12·22
14	4 59 20·67	25 37 50·4	55·82	14	6 50 52·85	27 22 35·0	13·62
15	5 1 39·29	25 43 25·3	54·42	15	6 53 10·88	27 21 13·3	15·03
16	5 3 58·03	25 48 51·8	53·00	16	6 55 28·76	27 19 43·1	16·43
17	5 6 16·88	25 54 9·8	51·57	17	6 57 46·48	27 18 4·5	17·82
18	5 8 35·84	25 59 19·2	50·17	18	7 0 4·04	27 16 17·6	19·22
19	5 10 54·89	26 4 20·2	48·72	19	7 2 21·43	27 14 22·3	20·60
20	5 13 14·04	26 9 12·5	47·30	20	7 4 38·65	27 12 18·7	21·98
21	5 15 33·29	26 13 56·3	45·87	21	7 6 55·70	27 10 6·8	23·35
22	5 17 52·62	26 18 31·5	44·42	22	7 9 12·56	27 7 46·7	24·72
23	5 20 12·03	N.26 22 58·0	42·98	23	7 11 29·24	N.27 5 18·4	26·08
	THURSDAY 14.				*SATURDAY* 16.		
0	5 22 31·51	N.26 27 15·9	41·53	0	7 13 45·73	N.27 2 41·9	27·43
1	5 24 51·07	26 31 25·1	40·10	1	7 16 2·02	26 59 57·3	28·78
2	5 27 10·70	26 35 25·7	38·63	2	7 18 18·12	26 57 4·6	30·13
3	5 29 30·38	26 39 17·5	37·18	3	7 20 34·01	26 54 3·8	31·47
4	5 31 50·12	26 43 0·6	35·73	4	7 22 49·69	26 50 55·0	32·80
5	5 34 9·91	26 46 35·0	34·27	5	7 25 5·16	26 47 38·2	34·12
6	5 36 29·74	26 50 0·6	32·82	6	7 27 20·42	26 44 13·5	35·43
7	5 38 49·61	26 53 17·5	31·35	7	7 29 35·45	26 40 40·9	36·73
8	5 41 9·52	26 56 25·6	29·90	8	7 31 50·26	26 37 0·5	38·05
9	5 43 29·45	26 59 25·0	28·42	9	7 34 4·84	26 33 12·2	39·33
10	5 45 49·40	27 2 15·5	26·97	10	7 36 19·19	26 29 16·2	40·63
11	5 48 9·36	27 4 57·3	25·50	11	7 38 33·30	26 25 12·4	41·90
12	5 50 29·33	27 7 30·3	24·03	12	7 40 47·17	26 21 1·0	43·18
13	5 52 49·31	27 9 54·5	22·57	13	7 43 0·80	26 16 41·9	44·43
14	5 55 9·28	27 12 9·9	21·10	14	7 45 14·19	26 12 15·3	45·70
15	5 57 29·25	27 14 16·5	19·63	15	7 47 27·33	26 7 41·1	46·95
16	5 59 49·21	27 16 14·3	18·15	16	7 49 40·22	26 2 59·4	48·18
17	6 2 9·14	27 18 3·2	16·70	17	7 51 52·85	25 58 10·3	49·42
18	6 4 29·05	27 19 43·4	15·23	18	7 54 5·22	25 53 13·8	50·63
19	6 6 48·92	27 21 14·8	13·78	19	7 56 17·34	25 48 10·0	51·87
20	6 9 8·76	27 22 37·5	12·30	20	7 58 29·19	25 42 58·8	53·05
21	6 11 28·56	27 23 51·3	10·85	21	8 0 40·78	25 37 40·5	54·27
22	6 13 48·30	27 24 56·4	9·37	22	8 2 52·10	25 32 14·9	55·45
23	6 16 7·99	27 25 52·6	7·93	23	8 5 3·16	25 26 42·2	56·63
24	6 18 27·63	N.27 26 40·2		24	8 7 13·93	N.25 21 2·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 17.		
	h m s	° ′ ″	″
0	8 7 13·93	N.25 21 2·4	57·80
1	8 9 24·43	25 15 15·6	58·97
2	8 11 34·66	25 9 21·8	60·12
3	8 13 44·61	25 3 21·1	61·28
4	8 15 54·28	24 57 13·4	62·40
5	8 18 3·67	24 50 59·0	63·53
6	8 20 12·77	24 44 37·8	64·65
7	8 22 21·59	24 38 9·9	65·78
8	8 24 30·13	24 31 35·2	66·87
9	8 26 38·38	24 24 54·0	67·97
10	8 28 46·35	24 18 6·2	69·05
11	8 30 54·02	24 11 11·9	70·13
12	8 33 1·41	24 4 11·1	71·20
13	8 35 8·51	23 57 3·9	72·25
14	8 37 15·31	23 49 50·4	73·32
15	8 39 21·82	23 42 30·5	74·35
16	8 41 28·04	23 35 4·4	75·37
17	8 43 33·97	23 27 32·2	76·40
18	8 45 39·61	23 19 53·8	77·42
19	8 47 44·95	23 12 9·3	78·42
20	8 49 50·00	23 4 18·8	79·42
21	8 51 54·76	22 56 22·3	80·40
22	8 53 59·23	22 48 19·9	81·37
23	8 56 3·40	N.22 40 11·7	82·35
	MONDAY 18.		
0	8 58 7·28	N.22 31 57·6	83·30
1	9 0 10·87	22 23 37·8	84·25
2	9 2 14·17	22 15 12·3	85·18
3	9 4 17·18	22 6 41·2	86·13
4	9 6 19·90	21 58 4·4	87·03
5	9 8 22·33	21 49 22·2	87·97
6	9 10 24·48	21 40 34·4	88·85
7	9 12 26·33	21 31 41·3	89·77
8	9 14 27·90	21 22 42·7	90·63
9	9 16 29·19	21 13 38·9	91·52
10	9 18 30·20	21 4 29·8	92·38
11	9 20 30·92	20 55 15·5	93·25
12	9 22 31·36	20 45 56·0	94·10
13	9 24 31·53	20 36 31·4	94·93
14	9 26 31·41	20 27 1·8	95·77
15	9 28 31·01	20 17 27·2	96·58
16	9 30 30·35	20 7 47·7	97·42
17	9 32 29·41	19 58 3·2	98·22
18	9 34 28·21	19 48 13·9	99 00
19	9 36 26·73	19 38 19·9	99·82
20	9 38 24·99	19 28 21·0	100·58
21	9 40 22·99	19 18 17·5	101·35
22	9 42 20·72	19 8 9·4	102·13
23	9 44 18·19	18 57 56·6	102·87
24	9 46 15·41	N.18 47 39·4	

Hour.	Right Ascension.	Declination.	Diff. De for 10m.
	TUESDAY 19.		
	h m s	° ′ ″	″
0	9 46 15·41	N.18 47 39·4	103·[illegible]
1	9 48 12·37	18 37 17·6	104·[illegible]
2	9 50 9·07	18 26 51·5	105·[illegible]
3	9 52 5·53	18 16 20·9	105·[illegible]
4	9 54 1·73	18 5 46·0	106·[illegible]
5	9 55 57·69	17 55 6·8	107·[illegible]
6	9 57 53·41	17 44 23·3	107·[illegible]
7	9 59 48·88	17 33 35·7	108·[illegible]
8	10 1 44·12	17 22 43·9	109·[illegible]
9	10 3 39·12	17 11 48·0	109·[illegible]
10	10 5 33·89	17 0 48·1	110·[illegible]
11	10 7 28·43	16 49 44·2	111·[illegible]
12	10 9 22·74	16 38 36·3	111·[illegible]
13	10 11 16·83	16 27 24·5	112·[illegible]
14	10 13 10·70	16 16 8·9	113·[illegible]
15	10 15 4·35	16 4 49·4	113·[illegible]
16	10 16 57·79	15 53 26·2	114·[illegible]
17	10 18 51·02	15 41 59·3	115·[illegible]
18	10 20 44·04	15 30 28·7	115·[illegible]
19	10 22 36·86	15 18 54·4	116·[illegible]
20	10 24 29·47	15 7 16·6	116·[illegible]
21	10 26 21·88	14 55 35·2	117·[illegible]
22	10 28 14·10	14 43 50·4	118·[illegible]
23	10 30 6·13	N.14 32 2·1	118·[illegible]
	WEDNESDAY 20.		
0	10 31 57·97	N.14 20 10·4	119·[illegible]
1	10 33 49·62	14 8 15·4	119·[illegible]
2	10 35 41·10	13 56 17·0	120·[illegible]
3	10 37 32·39	13 44 15·4	120·[illegible]
4	10 39 23·51	13 32 10·5	121·[illegible]
5	10 41 14·47	13 20 2·5	121·[illegible]
6	10 43 5·25	13 7 51·3	122·[illegible]
7	10 44 55·87	12 55 37·0	122·[illegible]
8	10 46 46·34	12 43 19·6	123·[illegible]
9	10 48 36·64	12 30 59·3	123·[illegible]
10	10 50 26·80	12 18 35·9	124·[illegible]
11	10 52 16·81	12 6 9·7	124·[illegible]
12	10 54 6·67	11 53 40·5	125·[illegible]
13	10 55 56·39	11 41 8·5	125·[illegible]
14	10 57 45·98	11 28 33·7	126·[illegible]
15	10 59 35·43	11 15 56·1	126·[illegible]
16	11 1 24·76	11 3 15·8	127·[illegible]
17	11 3 13·96	10 50 32·8	127·[illegible]
18	11 5 3·04	10 37 47·1	128·[illegible]
19	11 6 52·00	10 24 58·8	128·[illegible]
20	11 8 40·85	10 12 8·0	12[illegible]
21	11 10 29·59	9 59 [illegible]	
22	11 12 18·23	9 4[illegible]	
23	11 14 6·76	9 [illegible]	
24	11 15 55·20	N. [illegible]	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 21.				*SATURDAY 23.*		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	11 15 55·20	N. 9 20 19·9	130·50	0	12 42 12·59	S. 1 38 33·2	141·70
1	11 17 43·54	9 7 16·9	130·90	1	12 44 1·76	1 52 43·4	141·77
2	11 19 31·80	8 54 11·5	131·28	2	12 45 51·07	2 6 54·0	141·82
3	11 21 19·97	8 41 3·8	131·65	3	12 47 40·51	2 21 4·9	141·87
4	11 23 8·06	8 27 53·9	132·02	4	12 49 30·09	2 35 16·1	141·92
5	11 24 56·08	8 14 41·8	132·38	5	12 51 19·83	2 49 27·6	141·93
6	11 26 44·02	8 1 27·5	132·73	6	12 53 9·72	3 3 39·2	141·97
7	11 28 31·90	7 48 11·1	133·08	7	12 54 59·77	3 17 51·0	141·98
8	11 30 19·72	7 34 52·6	133·42	8	12 56 49·98	3 32 2·9	142·00
9	11 32 7·48	7 21 32·1	133·77	9	12 58 40·36	3 46 14·9	141·98
10	11 33 55·18	7 8 9·5	134·08	10	13 0 30·91	4 0 26·8	141·98
11	11 35 42·83	6 54 45·0	134·42	11	13 2 21·64	4 14 38·7	141·97
12	11 37 30·45	6 41 18·5	134·73	12	13 4 12·56	4 28 50·5	141·95
13	11 39 18·02	6 27 50·1	135·03	13	13 6 3·67	4 43 2·2	141·90
14	11 41 5·55	6 14 19·9	135·33	14	13 7 54·98	4 57 13·6	141·87
15	11 42 53·05	6 0 47·9	135·65	15	13 9 46·48	5 11 24·8	141·82
16	11 44 40·53	5 47 14·0	135·92	16	13 11 38·19	5 25 35·7	141·77
17	11 46 27·98	5 33 38·5	136·22	17	13 13 30·11	5 39 46·3	141·68
18	11 48 15·41	5 20 1·2	136·50	18	13 15 22·25	5 53 56·4	141·62
19	11 50 2·83	5 6 22·2	136·75	19	13 17 14·61	6 8 6·1	141·52
20	11 51 50·23	4 52 41·7	137·03	20	13 19 7·19	6 22 15·2	141·43
21	11 53 37·64	4 38 59·5	137·28	21	13 21 0·01	6 36 23·8	141·33
22	11 55 25·04	4 25 15·8	137·53	22	13 22 53·06	6 50 31·8	141·22
23	11 57 12·44	N. 4 11 30·6	137·78	23	13 24 46·35	S. 7 4 39·1	141·08
	FRIDAY 22.				*SUNDAY 24.*		
0	11 58 59·85	N. 3 57 43·9	138·02	0	13 26 39·89	S. 7 18 45·6	140·95
1	12 0 47·28	3 43 55·8	138·25	1	13 28 33·68	7 32 51·3	140·82
2	12 2 34·72	3 30 6·3	138·48	2	13 30 27·73	7 46 56·2	140·67
3	12 4 22·19	3 16 15·4	138·70	3	13 32 22·05	8 1 0·2	140·50
4	12 6 9·68	3 2 23·2	138·90	4	13 34 16·63	8 15 3·2	140·32
5	12 7 57·21	2 48 29·8	139·12	5	13 36 11·48	8 29 5·1	140·15
6	12 9 44·77	2 34 35·1	139·32	6	13 38 6·62	8 43 6·0	139·95
7	12 11 32·37	2 20 39·2	139·50	7	13 40 2·03	8 57 5·7	139·73
8	12 13 20·02	2 6 42·2	139·70	8	13 41 57·73	9 11 4·1	139·53
9	12 15 7·72	1 52 44·0	139·87	9	13 43 53·73	9 25 1·3	139·30
10	12 16 55·48	1 38 44·8	140·05	10	13 45 50·03	9 38 57·1	139·07
11	12 18 43·29	1 24 44·5	140·20	11	13 47 46·63	9 52 51·5	138·82
12	12 20 31·17	1 10 43·3	140·37	12	13 49 43·54	10 6 44·4	138·55
13	12 22 19·12	0 56 41·1	140·52	13	13 51 40·77	10 20 35·7	138·30
14	12 24 7·15	0 42 38·0	140·65	14	13 53 38·31	10 34 25·5	138·00
15	12 25 55·25	0 28 34·1	140·80	15	13 55 36·18	10 48 13·5	137·72
16	12 27 43·44	0 14 29·3	140·92	16	13 57 34·38	11 1 59·8	137·40
17	12 29 31·72	N. 0 0 23·8	141·05	17	13 59 32·92	11 15 44·2	137·08
18	12 31 20·09	S. 0 13 42·5	141·17	18	14 1 31·80	11 29 26·7	136·77
19	12 33 8·56	0 27 49·5	141·27	19	14 3 31·03	11 43 7·3	136·42
20	12 34 57·14	0 41 57·1	141·37	20	14 5 30·60	11 56 45·8	136·07
	9a	0 56 5·3	141·47	21	14 7 30·53	12 10 22·2	135·70
		1 10 14·1	141·55	22	14 9 30·82	12 23 56·4	135·32
		24 23·4	141·63	23	14 11 31·48	12 37 28·3	134·93
		33·2		24	14 13 32·51	S. 12 50 57·9	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 25.		
	h m s	° ′ ″	″
0	14 13 32·51	S. 12 50 57·9	134·53
1	14 15 33·92	13 4 25·1	134·10
2	14 17 35·70	13 17 49·7	133·68
3	14 19 37·87	13 31 11·8	133·23
4	14 21 40·43	13 44 31·2	132·77
5	14 23 43·39	13 57 47·8	132·32
6	14 25 46·75	14 11 1·7	131·82
7	14 27 50·52	14 24 12·6	131·32
8	14 29 54·69	14 37 20·5	130·80
9	14 31 59·28	14 50 25·3	130·28
10	14 34 4·29	15 3 27·0	129·73
11	14 36 9·72	15 16 25·4	129·18
12	14 38 15·57	15 29 20·5	128·60
13	14 40 21·86	15 42 12·1	128·03
14	14 42 28·59	15 55 0·3	127·42
15	14 44 35·76	16 7 44·8	126·80
16	14 46 43·38	16 20 25·6	126·17
17	14 48 51·45	16 33 2·6	125·52
18	14 50 59·97	16 45 35·7	124·87
19	14 53 8·95	16 58 4·9	124·18
20	14 55 18·39	17 10 30·0	123·47
21	14 57 28·29	17 22 50·8	122·77
22	14 59 38·67	17 35 7·4	122·05
23	15 1 49·51	S. 17 47 19·7	121·30
	TUESDAY 26.		
0	15 4 0·83	S. 17 59 27·5	120·53
1	15 6 12·63	18 11 30·7	119·77
2	15 8 24·92	18 23 29·3	118·97
3	15 10 37·69	18 35 23·1	118·15
4	15 12 50·96	18 47 12·0	117·32
5	15 15 4·71	18 58 55·9	116·47
6	15 17 18·96	19 10 34·7	115·62
7	15 19 33·72	19 22 8·4	114·72
8	15 21 48·97	19 33 36·7	113·82
9	15 24 4·72	19 44 59·6	112·90
10	15 26 20·98	19 56 17·0	111·97
11	15 28 37·74	20 7 28·8	111·02
12	15 30 55·02	20 18 34·9	110·03
13	15 33 12·81	20 29 35·1	109·05
14	15 35 31·12	20 40 29·4	108·03
15	15 37 49·94	20 51 17·6	107·00
16	15 40 9·28	21 1 59·6	105·95
17	15 42 29·15	21 12 35·3	104·88
18	15 44 49·53	21 23 4·6	103·80
19	15 47 10·43	21 33 27·4	102·70
20	15 49 31·85	21 43 43·6	101·57
21	15 51 53·80	21 53 53·0	100·43
22	15 54 16·27	22 3 55·6	99·27
23	15 56 39·26	22 13 51·2	98·08
24	15 59 2·77	S. 22 23 39·7	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 27.		
	h m s	° ′ ″	″
0	15 59 2·77	S. 22 23 39·7	96·1
1	16 1 26·81	22 33 21·0	95·1
2	16 3 51·37	22 42 55·0	94·1
3	16 6 16·45	22 52 21·6	93·1
4	16 8 42·05	23 1 40·7	91·1
5	16 11 8·17	23 10 52·0	90·1
6	16 13 34·81	23 19 55·6	89·1
7	16 16 1·97	23 28 51·3	87·1
8	16 18 29·64	23 37 38·9	86·1
9	16 20 57·82	23 46 18·4	85·1
10	16 23 26·52	23 54 49·7	83·1
11	16 25 55·72	24 3 12·7	82·1
12	16 28 25·43	24 11 27·1	80·1
13	16 30 55·64	24 19 32·9	79·1
14	16 33 26·36	24 27 30·1	78·1
15	16 35 57·57	24 35 18·4	76·1
16	16 38 29·27	24 42 57·8	75·1
17	16 41 1·46	24 50 28·1	73·1
18	16 43 34·14	24 57 49·3	71·1
19	16 46 7·29	25 5 1·2	70·1
20	16 48 40·93	25 12 3·7	68·1
21	16 51 15·03	25 18 56·7	67·1
22	16 53 49·60	25 25 40·1	65·1
23	16 56 24·62	S. 25 32 13·9	63·1
	THURSDAY 28.		
0	16 59 0·10	S. 25 38 37·8	62·1
1	17 1 36·03	25 44 51·8	60·1
2	17 4 12·40	25 50 55·9	58·1
3	17 6 49·20	25 56 49·8	57·1
4	17 9 26·43	26 2 33·4	55·1
5	17 12 4·08	26 8 6·8	53·1
6	17 14 42·15	26 13 29·7	52·1
7	17 17 20·62	26 18 42·1	50·1
8	17 19 59·49	26 23 43·8	48·1
9	17 22 38·75	26 28 34·9	46·1
10	17 25 18·39	26 33 15·2	44·1
11	17 27 58·41	26 37 44·6	43·1
12	17 30 38·79	26 42 3·0	41·1
13	17 33 19·52	26 46 10·3	39·1
14	17 36 0·60	26 50 6·5	37·1
15	17 38 42·01	26 53 51·5	35·1
16	17 41 23·75	26 57 25·1	33·1
17	17 44 5·81	27 0 47·3	31·1
18	17 46 48·16	27 3 58·1	29·1
19	17 49 30·81	27 6 57·4	27·1
20	17 52 13·75	27 9 4	
21	17 54 56·96	27 12 2	
22	17 57 40·43	27 14	
23	18 0 24·15	27	
24	18 3 8·11	S	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 29.				*SATURDAY* 30.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	18 3 8·11	S. 27 18 58·5	18·12	0	19 9 23·31	S. 27 6 21·7	30·92
1	18 5 52·30	27 20 47·2	16·13	1	19 12 9·24	27 3 16·2	32·97
2	18 8 36·71	27 22 24·0	14·13	2	19 14 55·08	26 59 58·4	35·00
3	18 11 21·33	27 23 48·8	12·12	3	19 17 40·83	26 56 28·4	37·03
4	18 14 6·13	27 25 1·5	10·10	4	19 20 26·46	26 52 46·2	39·05
5	18 16 51·12	27 26 2·1	8·08	5	19 23 11·97	26 48 51·9	41·08
6	18 19 36·27	27 26 50·6	6·07	6	19 25 57·35	26 44 45·4	43·08
7	18 22 21·58	27 27 27·0	4·02	7	19 28 42·58	26 40 26·9	45·10
8	18 25 7·03	27 27 51·1	1·98	8	19 31 27·65	26 35 56·3	47·10
9	18 27 52·61	27 28 3·0	0·07	9	19 34 12·55	26 31 13·7	49·10
10	18 30 38·31	27 28 2·6	2·10	10	19 36 57·27	26 26 19·1	51·07
11	18 33 24·11	27 27 50·0	4·17	11	19 39 41·80	26 21 12·7	53·05
12	18 36 10·01	27 27 25·0	6·22	12	19 42 26·13	26 15 54·4	55·00
13	18 38 55·99	27 26 47·7	8·28	13	19 45 10·24	26 10 24·4	56·97
14	18 41 42·03	27 25 58·0	10·33	14	19 47 54·13	26 4 42·6	58·90
15	18 44 28·13	27 24 56·0	12·40	15	19 50 37·78	25 58 49·2	60·83
16	18 47 14·27	27 23 41·6	14·45	16	19 53 21·18	25 52 44·2	62·73
17	18 50 0·44	27 22 14·9	16·52	17	19 56 4·33	25 46 27·8	64·65
18	18 52 46·62	27 20 35·8	18·58	18	19 58 47·21	25 39 59·9	66·55
19	18 55 32·80	27 18 44·3	20·63	19	20 1 29·82	25 33 20·6	68·42
20	18 58 18·97	27 16 40·5	22·70	20	20 4 12·15	25 26 30·1	70·28
21	19 1 5·12	27 14 24·3	24·77	21	20 6 54·18	25 19 28·4	72·15
22	19 3 51·24	27 11 55·7	26·80	22	20 9 35·91	25 12 15·5	73·98
23	19 6 37·30	27 9 14·9	28·87	23	20 12 17·33	25 4 51·6	75·80
24	19 9 23·31	S. 27 6 21·7		24	20 14 58·44	S. 24 57 16·8	

PHASES OF THE MOON.

		d	h	m
☾	*Last Quarter*	6	19	47·9
●	New Moon	14	2	28·9
☽	*First Quarter*	22	4	52·0
○	Full Moon	29	11	13·7

		d	h
☾	Perigee	3	12
☾	Apogee	19	6

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.
		° ′ ″		° ′ ″		° ′ ″		° ′
1	Spica ♍ W.	60 8 15	2269	61 55 0	2261	63 41 57	2254	65 29
	Antares W.	14 17 46	2309	16 3 32	2292	17 49 44	2277	19 36
	Jupiter E.	69 54 15	2288	68 7 58	2280	66 21 29	2274	64 34
	Fomalhaut E.	69 58 42	2458	68 16 30	2456	66 34 15	2455	64 51
	α Pegasi E.	90 34 33	2630	88 56 19	2623	87 17 55	2617	85 39
2	Spica ♍ W.	74 27 0	2219	76 14 59	2216	78 3 3	2212	79 51
	Antares W.	28 32 52	2224	30 20 44	2219	32 8 44	2214	33 56
	Jupiter E.	55 39 33	2243	53 52 10	2240	52 4 42	2237	50 17
	Fomalhaut E.	56 21 6	2473	54 39 15	2482	52 57 36	2492	51 16
	α Pegasi E.	77 25 37	2606	75 46 50	2609	74 8 7	2613	72 29
	α Arietis E.	119 31 10	2306	117 45 19	2299	115 59 18	2292	114 13
3	Spica ♍ W.	88 52 53	2201	90 41 19	2201	92 29 45	2201	94 18
	Antares W.	42 58 37	2199	44 47 6	2198	46 35 37	2197	48 24
	Jupiter E.	41 18 59	2233	39 31 21	2235	37 43 46	2237	35 56
	Fomalhaut E.	42 54 27	2604	41 15 38	2635	39 37 31	2670	38 0
	α Pegasi E.	64 18 49	2668	62 41 26	2684	61 4 25	2702	59 27
	α Arietis E.	105 20 36	2270	103 33 52	2269	101 47 7	2268	100 0
4	Spica ♍ W.	103 19 59	2210	105 8 11	2213	106 56 19	2216	108 44
	Antares W.	57 26 29	2204	59 14 50	2207	61 3 7	2210	62 51
	Jupiter E.	27 0 6	2270	25 13 23	2281	23 26 56	2293	21 40
	Fomalhaut E.	30 10 23	3046	28 41 7	3153	27 14 1	3281	25 49
	α Pegasi E.	51 32 22	2863	49 59 16	2902	48 27 0	2945	46 55
	α Arietis E.	91 6 33	2274	89 19 55	2276	87 33 20	2280	85 46
	Sun E.	127 39 29	2503	125 58 20	2505	124 17 14	2509	122 36
5	Antares W.	71 51 4	2233	73 38 42	2239	75 26 12	2243	77 13
	α Pegasi E.	39 36 23	3339	38 12 57	3438	36 51 23	3550	35 31
	α Arietis E.	76 55 56	2308	75 10 8	2315	73 24 30	2321	71 39
	Sun E.	114 12 25	2534	112 31 59	2539	110 51 40	2544	109 11
6	Antares W.	86 8 27	2278	87 54 59	2285	89 41 21	2291	91 27
	α Aquilæ W.	47 33 41	4132	48 43 12	4036	49 54 16	3952	51 6
	α Arietis E.	62 54 21	2370	61 10 3	2380	59 25 59	2389	57 42
	Sun E.	100 52 34	2581	99 13 13	2589	97 34 3	2595	95 55
7	Antares W.	100 16 7	2333	102 1 19	2340	103 46 20	2348	105 31
	α Aquilæ W.	57 26 5	3598	58 44 42	3558	60 4 2	3523	61 24
	Fomalhaut W.	23 21 31	3712	24 38 5	3544	25 57 40	3408	27 19
	Jupiter W.	16 27 6	2464	18 9 10	2450	19 51 33	2442	21 34
	α Arietis E.	49 7 7	2463	47 25 2	2479	45 43 19	2495	44 1
	Sun E.	87 42 26	2641	86 4 27	2649	84 26 38	2656	82 48
8	α Aquilæ W.	68 11 33	3379	69 34 13	3365	70 57 9	3353	72 20
	Fomalhaut W.	34 36 44	2964	36 7 42	2925	37 39 29	2894	39 11
	Jupiter W.	30 7 43	2442	31 50 18	2446	33 32 47	2450	35 15
	α Pegasi W.	25 9 30	6556	25 49 17	6011	26 34 23	5569	27 24
	α Arietis E.	35 41 55	2623	34 3 32	2653	32 25 49	2686	30 48
	Sun E.	74 43 32	2706	73 7 0	2715	71 30 40	2723	69 54
9	α Aquilæ W.	79 18 28	3318	80 42 19	3316	82 6 12	3318	83 30
	Fomalhaut W.	47 1 15	2785	48 36 3	2776	50 11 3	2768	51 46

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Spica ♍	W.	67 16 22	2241	69 3 49	2235	70 51 25	2229	72 39 9	2224
	Antares	W.	21 23 9	2254	23 10 16	2245	24 57 37	2237	26 45 9	2230
	Jupiter	E.	62 48 3	2262	61 1 7	2256	59 14 2	2251	57 26 51	2247
	Fomalhaut	E.	63 9 42	2455	61 27 26	2458	59 45 13	2462	58 3 6	2467
	α Pegasi	E.	84 0 45	2609	82 22 2	2606	80 43 15	2604	79 4 26	2604
2	Spica ♍	W.	81 39 26	2207	83 27 43	2204	85 16 4	2202	87 4 28	2202
	Antares	W.	35 45 3	2206	37 33 21	2204	39 21 43	2201	41 10 9	2200
	Jupiter	E.	48 29 34	2234	46 41 57	2233	44 54 18	2232	43 6 38	2233
	Fomalhaut	E.	49 35 3	2518	47 54 15	2535	46 13 50	2555	44 33 53	2577
	α Pegasi	E.	70 50 58	2625	69 12 37	2633	67 34 27	2643	65 56 30	2655
	α Arietis	E.	112 26 49	2283	110 40 24	2278	108 53 52	2275	107 7 16	2272
3	Spica ♍	W.	96 6 37	2202	97 55 1	2204	99 43 23	2206	101 31 42	2207
	Antares	W.	50 12 40	2198	52 1 10	2199	53 49 39	2201	55 38 5	2202
	Jupiter	E.	34 8 46	2243	32 21 23	2249	30 34 8	2255	28 47 2	2262
	Fomalhaut	E.	36 23 47	2759	34 48 25	2815	33 14 17	2880	31 41 32	2955
	α Pegasi	E.	57 51 36	2744	56 15 54	2769	54 40 45	2797	53 6 13	2828
	α Arietis	E.	98 13 32	2268	96 26 45	2268	94 39 59	2270	92 53 15	2271
4	Spica ♍	W.	110 32 21	2224	112 20 13	2228	114 7 59	2233	115 55 38	2237
	Antares	W.	64 39 28	2216	66 27 31	2220	68 15 28	2224	70 3 19	2229
	Jupiter	E.	19 54 59	2328	18 9 41	2353	16 24 58	2386	14 41 3	2430
	Fomalhaut	E.	24 27 50	3624	23 9 42	3857	21 55 39	4147	20 46 23	4514
	α Pegasi	E.	45 25 18	3048	43 56 5	3109	42 28 6	3177	41 1 29	3253
	α Arietis	E.	84 0 27	2287	82 14 9	2292	80 27 57	2297	78 41 53	2302
	Sun	E.	120 55 16	2515	119 14 24	2520	117 33 39	2524	115 52 59	2528
5	Antares	W.	79 0 51	2254	80 47 58	2260	82 34 56	2266	84 21 46	2272
	α Pegasi	E.	34 14 42	3822	33 0 3	3990	31 48 14	4185	30 39 34	4412
	α Arietis	E.	69 53 42	2335	68 8 34	2344	66 23 38	2351	64 38 53	2360
	Sun	E.	107 31 24	2556	105 51 29	2562	104 11 42	2568	102 32 3	2575
6	Antares	W.	93 13 37	2304	94 59 30	2312	96 45 12	2318	98 30 45	2326
	α Aquilæ	W.	52 20 27	3807	53 35 22	3747	54 51 20	3692	56 8 16	3642
	α Arietis	E.	55 58 34	2412	54 15 16	2424	52 32 15	2436	50 49 31	2450
	Sun	E.	94 16 10	2610	92 37 29	2618	90 58 58	2625	89 20 37	2632
7	Antares	W.	107 15 50	2363	109 0 18	2370	110 44 36	2378	112 28 42	2386
	α Aquilæ	W.	62 44 35	3463	64 5 41	3438	65 27 15	3416	66 49 13	3397
	Fomalhaut	W.	28 44 3	3203	30 10 9	3127	31 37 46	3062	33 6 42	3009
	Jupiter	W.	23 16 50	2435	24 59 35	2436	26 42 19	2436	28 25 3	2438
	α Arietis	E.	42 21 1	2530	40 40 30	2551	39 0 28	2572	37 20 55	2596
	Sun	E.	81 11 32	2672	79 34 15	2681	77 57 10	2689	76 20 15	2698
8	α Aquilæ	W.	73 43 41	3334	75 7 13	3327	76 30 53	3323	77 54 38	3319
	Fomalhaut	W.	40 44 57	2843	42 18 29	2825	43 52 24	2808	45 26 41	2795
	Jupiter	W.	36 57 26	2460	38 39 35	2467	40 21 35	2473	42 3 26	2479
	α Pegasi	W.	28 18 38	4900	29 16 53	4645	30 18 39	4429	31 23 34	4245
	α Arietis	E.	29 12 42	2767	27 37 31	2818	26 3 26	2876	24 30 36	2946
	Sun	E.	68 18 33	2740	66 42 46	2749	65 7 11	2758	63 31 48	2767
9	[illegible]	W.	84 53 51	3324	86 17 35	3329	87 41 13	3334	89 4 45	3342
			[illegible] 30	2758	54 56 53	2756	56 32 19	2753	58 7 48	2753

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Jupiter	W.	43 45 9	2485	45 26 43	2492	47 8 7	2500	48 49 21	2506
	α Pegasi	W.	32 31 18	4088	33 41 31	3954	34 53 56	3838	36 8 19	3737
	Sun	E.	61 56 37	2776	60 21 37	2785	58 46 49	2794	57 12 13	2802
10	α Aquilæ	W.	90 28 8	3351	91 51 21	3360	93 14 23	3371	94 37 12	3384
	Fomalhaut	W.	59 43 18	2753	61 18 48	2753	62 54 17	2755	64 29 44	2757
	Jupiter	W.	57 13 3	2543	58 53 17	2551	60 33 20	2559	62 13 12	2567
	α Pegasi	W.	42 42 42	3401	44 4 57	3357	45 28 3	3318	46 51 54	3285
	Sun	E.	49 22 11	2849	47 48 47	2859	46 15 35	2869	44 42 36	2878
11	α Aquilæ	W.	101 27 20	3464	102 48 24	3484	104 9 6	3506	105 29 24	3530
	Fomalhaut	W.	72 25 57	2777	74 0 55	2783	75 35 45	2789	77 10 28	2795
	Jupiter	W.	70 29 50	2607	72 8 36	2615	73 47 11	2623	75 25 35	2632
	α Pegasi	W.	53 59 26	3171	55 26 10	3157	56 53 11	3144	58 20 27	3133
	Sun	E.	37 0 53	2930	35 29 12	2941	33 57 45	2952	32 26 32	2964
16	Sun	W.	22 9 54	3349	23 33 9	3352	24 56 20	3357	26 19 26	3361
	Regulus	E.	41 33 13	2976	40 2 30	2986	38 32 0	2996	37 1 42	3006
	Spica ♍	E.	95 33 0	2954	94 1 50	2962	92 30 50	2970	91 0 0	2977
17	Sun	W.	33 13 29	3388	34 35 59	3394	35 58 22	3400	37 20 39	3404
	Regulus	E.	29 33 32	3062	28 4 36	3074	26 35 55	3087	25 7 30	3102
	Spica ♍	E.	83 28 10	3014	81 58 15	3020	80 28 27	3027	78 58 48	3033
18	Sun	W.	44 10 40	3429	45 32 24	3432	46 54 4	3436	48 15 40	3439
	Spica ♍	E.	71 32 18	3060	70 3 19	3065	68 34 26	3069	67 5 38	3072
	Antares	E.	117 25 31	3054	115 56 25	3057	114 27 23	3061	112 58 26	3065
19	Sun	W.	55 2 50	3451	56 24 9	3453	57 45 26	3454	59 6 42	3454
	Venus	W.	12 38 52	3623	13 57 2	3605	15 15 31	3589	16 34 17	3576
	Spica ♍	E.	59 42 39	3087	58 14 13	3088	56 45 49	3090	55 17 27	3091
	Antares	E.	105 34 39	3078	104 6 2	3078	102 37 26	3079	101 8 51	3081
20	Sun	W.	65 53 8	3449	67 14 29	3447	68 35 53	3444	69 57 20	3441
	Venus	W.	23 10 48	3538	24 30 30	3533	25 50 18	3526	27 10 13	3521
	Spica ♍	E.	47 55 47	3091	46 27 26	3090	44 59 4	3088	43 30 40	3087
	Antares	E.	93 45 59	3077	92 17 21	3074	90 48 40	3072	89 19 56	3069
21	Sun	W.	76 45 39	3417	78 7 36	3411	79 29 40	3404	80 51 52	3398
	Venus	W.	33 51 31	3487	35 12 10	3480	36 32 56	3472	37 53 52	3463
	Regulus	W.	18 45 53	3167	20 12 41	3145	21 39 56	3126	23 7 34	3109
	Spica ♍	E.	36 7 59	3073	34 39 17	3069	33 10 30	3066	31 41 39	3062
	Antares	E.	81 55 15	3048	80 26 2	3043	78 56 42	3036	77 27 14	3030
22	Sun	W.	87 45 1	3354	89 8 10	3344	90 31 30	3334	91 55 2	3323
	Venus	W.	44 41 2	3415	46 3 1	3404	47 25 13	3393	48 47 38	3381
	Regulus	W.	30 30 33	3036	32 0 1	3023	33 29 45	3010	34 59 46	2997
	Spica ♍	E.	24 16 17	3047	22 47 2	3045	21 17 45	3046	19 48 29	3048
	Antares	E.	69 57 45	2991	68 27 21	2981	66 56 45	2972	65 25 57	2962
	α Aquilæ	E.	115 9 50	4040	113 58 50	4007	112 47 17	3974	111 35 12	394[illegible]
23	Sun	W.	98 56 4	3262	100 21 0	3248	101 46 13	3234	103 11 42	
	Venus	W.	55 43 14	3316	57 7 7	3301	58 31 17	3286	59 55	
	Regulus	W.	42 33 59	2928	44 5 42	2914	45 37 43	2900	47	
	Antares	E.	57 48 36	2905	56 16 23	2893	54 43 55	2880	53	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
9	Jupiter	W.	50 30 26	2513	52 11 21	2521	53 52 5	2528	55 32 39	2535
	α Pegasi	W.	37 24 27	3650	38 42 7	3575	40 1 9	3509	41 21 23	3451
	Sun	E.	55 37 48	2812	54 3 36	2821	52 29 35	2831	50 55 47	2840
10	α Aquilæ	W.	95 59 47	3397	97 22 7	3412	98 44 10	3428	100 5 55	3446
	Fomalhaut	W.	66 5 8	2760	67 40 28	2764	69 15 43	2768	70 50 53	2772
	Jupiter	W.	63 52 53	2574	65 32 24	2582	67 11 43	2590	68 50 52	2598
	α Pegasi	W.	48 16 23	3255	49 41 27	3230	51 7 1	3207	52 33 2	3188
	Sun	E.	43 9 49	2889	41 37 16	2898	40 4 55	2909	38 32 47	2920
11	α Aquilæ	W.	106 49 15	3554	108 8 40	3581	109 27 35	3610	110 45 59	3639
	Fomalhaut	W.	78 45 3	2802	80 19 29	2809	81 53 45	2816	83 27 52	2824
	Jupiter	W.	77 3 47	2640	78 41 48	2649	80 19 37	2657	81 57 15	2666
	α Pegasi	W.	59 47 56	3125	61 15 35	3119	62 43 22	3113	64 11 16	3109
	Sun	E.	30 55 34	2976	29 24 51	2988	27 54 23	3001	26 24 12	3014
16	Sun	W.	27 42 27	3367	29 5 21	3372	30 28 10	3378	31 50 52	3382
	Regulus	E.	35 31 37	3017	34 1 46	3027	32 32 7	3039	31 2 42	3051
	Spica ♍	E.	89 29 19	2985	87 58 48	2993	86 28 27	3000	84 58 14	3007
17	Sun	W.	38 42 51	3410	40 4 56	3415	41 26 56	3419	42 48 51	3424
	Regulus	E.	23 39 23	3118	22 11 35	3136	20 44 9	3155	19 17 6	3179
	Spica ♍	E.	77 29 16	3039	75 59 52	3044	74 30 34	3050	73 1 23	3055
18	Sun	W.	49 37 12	3442	50 58 41	3446	52 20 6	3448	53 41 29	3449
	Spica ♍	E.	65 36 54	3076	64 8 15	3079	62 39 40	3082	61 11 8	3084
	Antares	E.	111 29 34	3068	110 0 45	3071	108 32 0	3074	107 3 18	3076
19	Sun	W.	60 27 58	3454	61 49 14	3453	63 10 31	3452	64 31 49	3451
	Venus	W.	17 53 17	3567	19 12 27	3559	20 31 46	3551	21 51 14	3545
	Spica ♍	E.	53 49 6	3092	52 20 46	3092	50 52 27	3092	49 24 7	3091
	Antares	E.	99 40 18	3080	98 11 44	3080	96 43 10	3079	95 14 35	3078
20	Sun	W.	71 18 50	3437	72 40 25	3433	74 2 4	3428	75 23 49	3423
	Venus	W.	28 30 14	3515	29 50 22	3507	31 10 38	3501	32 31 1	3495
	Spica ♍	E.	42 2 14	3084	40 33 45	3082	39 5 13	3079	37 36 38	3076
	Antares	E.	87 51 9	3066	86 22 18	3062	84 53 22	3058	83 24 21	3054
21	Sun	W.	82 14 11	3390	83 36 39	3382	84 59 16	3373	86 22 3	3364
	Venus	W.	39 14 58	3455	40 36 13	3446	41 57 38	3436	43 19 14	3425
	Regulus	W.	24 35 33	3092	26 3 52	3078	27 32 28	3064	29 1 22	3050
	Spica ♍	E.	30 12 43	3058	28 43 42	3056	27 14 38	3052	25 45 29	3049
	Antares	E.	75 57 39	3023	74 27 55	3016	72 58 2	3008	71 27 59	2999
22	Sun	W.	93 18 47	3312	94 42 45	3300	96 6 57	3288	97 31 23	3275
	Venus	W.	50 10 16	3369	51 33 8	3357	52 56 14	3343	54 19 36	3329
	Regulus	W.	36 30 3	2984	38 0 36	2970	39 31 27	2957	41 2 34	2943
	Spica ♍	E.	18 19 15	3053	16 50 8	3062	15 21 12	3078	13 52 35	3103
	Antares	E.	63 54 56	2951	62 23 42	2941	60 52 15	2929	59 20 33	2917
	α Aquilæ	E.	110 22 36	3914	109 9 30	3884	107 55 54	3856	106 41 50	3829
		W.	104 37 28	3205	106 3 31	3189	107 29 53	3174	108 56 33	3158
		W.	61 20 29	3256	62 45 32	3240	64 10 54	3224	65 36 35	3207
		W	48 42 40	2870	50 15 37	2855	51 48 54	2840	53 22 30	2824
			51 38 8	2853	50 4 49	2839	48 31 12	2825	46 57 16	2811

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	α Aquilæ	E.	105 27 18	3804	104 12 20	3778	102 56 55	3755	101 41 6	3731
24	Sun	W.	110 23 32	3143	111 50 50	3126	113 18 28	3109	114 46 27	3092
	Venus	W.	67 2 36	3190	68 28 57	3173	69 55 38	3155	71 22 41	3138
	Regulus	W.	54 56 27	2808	56 30 45	2792	58 5 24	2776	59 40 24	2759
	Antares	E.	45 23 2	2795	43 48 28	2780	42 13 34	2766	40 38 21	2750
	α Aquilæ	E.	95 16 4	3626	93 57 58	3608	92 39 32	3589	91 20 46	3572
25	Sun	W.	122 11 35	3005	123 41 42	2986	125 12 12	2969	126 43 4	2951
	Venus	W.	78 43 21	3045	80 12 38	3027	81 42 17	3007	83 12 21	2989
	Regulus	W.	67 40 59	2673	69 18 15	2656	70 55 54	2638	72 33 58	2620
	Spica ♍	W.	13 55 3	2809	15 29 19	2763	17 4 35	2725	18 40 41	2692
	Antares	E.	32 37 1	2671	30 59 42	2654	29 22 0	2639	27 43 58	2622
	α Aquilæ	E.	84 42 33	3500	83 22 9	3488	82 1 31	3478	80 40 42	3468
	Fomalhaut	E.	114 39 10	2873	113 6 16	2850	111 32 53	2828	109 59 2	2807
	Jupiter	E.	117 5 38	2666	115 28 12	2648	113 50 22	2630	112 12 8	2612
26	Venus	W.	90 48 42	2891	92 21 12	2872	93 54 7	2852	95 27 27	2833
	Regulus	W.	80 50 21	2530	82 30 52	2513	84 11 47	2495	85 53 7	2477
	Spica ♍	W.	26 51 11	2561	28 30 59	2539	30 11 18	2517	31 52 7	2497
	α Aquilæ	E.	73 54 25	3441	72 32 55	3441	71 11 25	3443	69 49 57	3446
	Fomalhaut	E.	102 2 49	2703	100 26 13	2683	98 49 10	2664	97 11 42	2645
	Jupiter	E.	103 54 49	2522	102 14 7	2504	100 33 0	2486	98 51 27	2469
27	Venus	W.	103 20 17	2740	104 56 4	2721	106 32 16	2704	108 8 51	2686
	Regulus	W.	94 25 58	2391	96 9 45	2375	97 53 56	2358	99 38 31	2343
	Spica ♍	W.	40 23 17	2400	42 6 52	2382	43 50 53	2364	45 35 19	2346
	α Aquilæ	E.	63 4 30	3503	61 44 9	3524	60 24 12	3549	59 4 42	3578
	Fomalhaut	E.	88 58 7	2557	87 18 13	2540	85 37 56	2525	83 57 18	2510
	Jupiter	E.	90 17 32	2382	88 33 31	2364	86 49 5	2348	85 4 16	2333
	α Pegasi	E.	108 43 36	2790	107 8 55	2766	105 33 42	2742	103 57 58	2720
28	Venus	W.	116 17 28	2604	117 56 17	2590	119 35 26	2575	121 14 55	2561
	Regulus	W.	108 27 3	2268	110 13 50	2254	112 0 57	2241	113 48 24	2228
	Spica ♍	W.	54 23 36	2267	56 10 24	2252	57 57 34	2238	59 45 5	2224
	Antares	W.	8 39 27	2385	10 23 24	2333	12 8 36	2294	13 54 44	2266
	α Aquilæ	E.	52 36 59	3808	51 22 5	3875	50 8 20	3951	48 55 52	4038
	Fomalhaut	E.	75 29 13	2446	73 46 43	2436	72 3 59	2426	70 21 1	2417
	Jupiter	E.	76 14 26	2256	74 27 22	2242	72 39 57	2229	70 52 13	2216
	α Pegasi	E.	95 52 24	2625	94 14 3	2609	92 35 20	2594	90 56 17	2581
29	Spica ♍	W.	68 47 28	2165	70 36 49	2154	72 26 26	2144	74 16 18	2135
	Antares	W.	22 53 55	2175	24 43 0	2162	26 32 25	2151	28 22 7	2140
	Fomalhaut	E.	61 43 41	2392	59 59 55	2391	58 16 7	2391	56 32 19	2394
	Jupiter	E.	61 48 52	2158	59 59 21	2149	58 9 36	2140	56 19 38	2131
	α Pegasi	E.	82 36 56	2530	80 56 25	2525	79 15 46	2520	77 35 0	2516
30	Spica ♍	W.	83 28 44	2100	85 19 44	2094	87 10 52	2090	89 2 7	2086
	Antares	W.	37 34 15	2099	39 25 16	2093	41 16 26	2088	43 7 43	2083
	Jupiter	E.	47 6 51	2099	45 15 51	2095	43 24 44	2092	41 33 32	2089
	Fomalhaut	E.	47 55 11	2438	46 12 30	2455	44 30 13	2476	42	
	α Pegasi	E.	69 10 40	2522	67 29 57	2529	65 49 24	2538		
	α Arietis	E.	110 39 12	2172	108 50 2	2165	107 0 41	21		

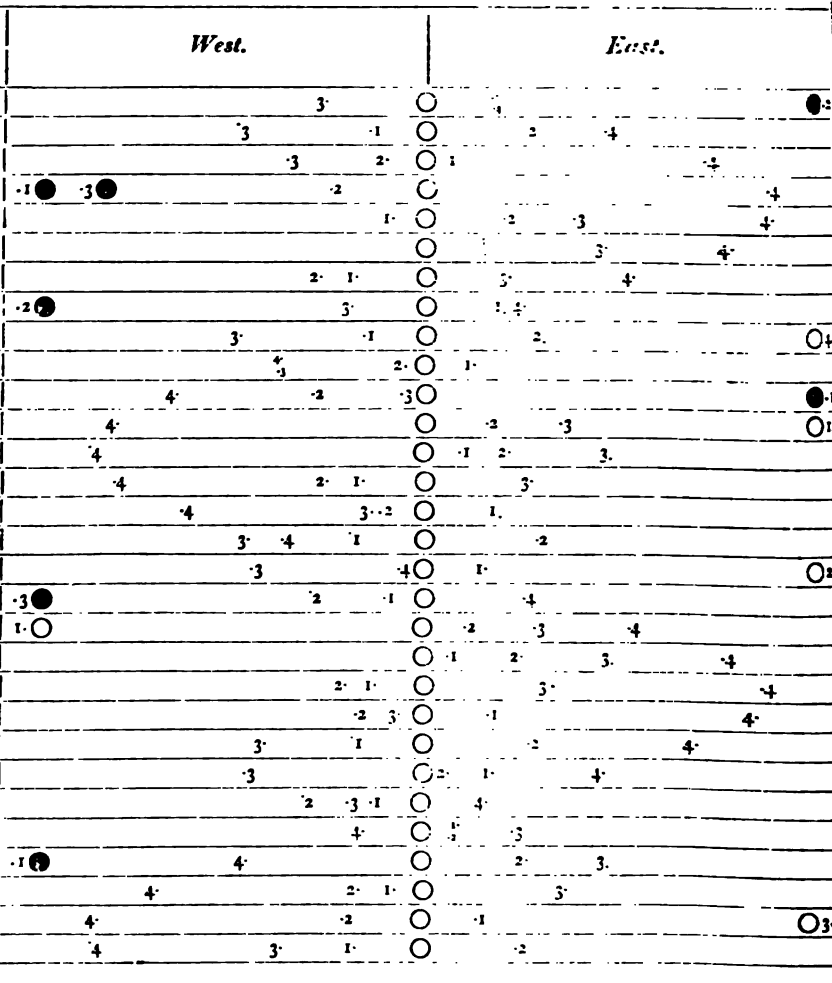
MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	α Aquilæ	E.	100 24 52	3709	99 8 14	3687	97 51 13	3665	96 33 49	3646
24	Sun	W.	116 14 46	3075	117 43 26	3058	119 12 27	3040	120 41 50	3022
	Venus	W.	72 50 4	3119	74 17 50	3101	75 45 58	3083	77 14 28	3064
	Regulus	W.	61 15 46	2742	62 51 30	2725	64 27 37	2708	66 4 6	2690
	Antares	E.	39 2 47	2734	37 26 52	2719	35 50 37	2702	34 14 0	2686
	α Aquilæ	E.	90 1 41	3556	88 42 19	3541	87 22 40	3525	86 2 44	3512
25	Sun	W.	128 14 18	2932	129 45 56	2914	131 17 57	2896	132 50 21	2878
	Venus	W.	84 42 48	2969	86 13 40	2950	87 44 56	2930	89 16 37	2911
	Regulus	W.	74 12 26	2602	75 51 18	2585	77 30 34	2567	79 10 15	2548
	Spica ♍	W.	20 17 31	2662	21 55 2	2634	23 33 11	2609	25 11 54	2584
	Antares	E.	26 5 33	2607	24 26 48	2592	22 47 42	2577	21 8 16	2564
	α Aquilæ	E.	79 19 42	3459	77 58 32	3453	76 37 15	3447	75 15 52	3444
	Fomalhaut	E.	108 24 43	2785	106 49 56	2764	105 14 41	2743	103 38 58	2723
	Jupiter	E.	110 33 29	2595	108 54 27	2576	107 14 59	2558	105 35 7	2540
26	Venus	W.	97 1 12	2814	98 35 21	2795	100 9 55	2776	101 44 54	2758
	Regulus	W.	87 34 52	2460	89 17 2	2443	90 59 36	2425	92 42 35	2408
	Spica ♍	W.	33 33 25	2476	35 15 12	2457	36 57 26	2437	38 40 8	2418
	α Aquilæ	E.	68 28 32	3453	67 7 15	3460	65 46 6	3471	64 25 10	3486
	Fomalhaut	E.	95 33 48	2627	93 55 29	2609	92 16 46	2591	90 37 38	2574
	Jupiter	E.	97 9 30	2451	95 27 8	2433	93 44 20	2416	92 1 8	2399
27	Venus	W.	109 45 49	2669	111 23 10	2652	113 0 54	2636	114 39 0	2620
	Regulus	W.	101 23 28	2326	103 8 49	2311	104 54 32	2296	106 40 37	2282
	Spica ♍	W.	47 20 11	2330	49 5 27	2314	50 51 6	2297	52 37 10	2282
	α Aquilæ	E.	57 45 44	3612	56 27 23	3651	55 9 44	3697	53 52 54	3749
	Fomalhaut	E.	82 16 19	2496	80 35 0	2482	78 53 22	2470	77 11 26	2458
	Jupiter	E.	83 19 4	2316	81 33 28	2301	79 47 30	2285	78 1 9	2270
	α Pegasi	E.	102 21 45	2699	100 45 4	2679	99 7 56	2660	97 30 22	2642
28	Venus	W.	122 54 44	2548	124 34 51	2535	126 15 15	2522	127 55 57	2511
	Regulus	W.	115 36 10	2215	117 24 15	2204	119 12 36	2192	121 1 15	2182
	Spica ♍	W.	61 32 56	2211	63 21 7	2199	65 9 36	2186	66 58 24	2176
	Antares	W.	15 41 33	2243	17 28 57	2222	19 16 52	2205	21 5 12	2190
	α Aquilæ	E.	47 44 50	4137	46 35 24	4248	45 27 43	4374	44 21 58	4517
	Fomalhaut	E.	68 37 51	2410	66 54 31	2403	65 11 1	2398	63 27 24	2394
	Jupiter	E.	69 4 9	2202	67 15 45	2191	65 27 4	2180	63 38 6	2169
	α Pegasi	E.	89 16 56	2569	87 37 18	2557	85 57 24	2547	84 17 16	2538
29	Spica ♍	W.	76 6 23	2127	77 56 41	2119	79 47 11	2111	81 37 53	2105
	Antares	W.	30 12 5	2130	32 2 18	2121	33 52 45	2113	35 43 25	2106
	Fomalhaut	E.	54 48 36	2398	53 4 58	2404	51 21 29	2412	49 38 12	2424
	Jupiter	E.	54 29 26	2124	52 39 3	2116	50 48 28	2110	48 57 44	2104
	α Pegasi	E.	75 54 9	2514	74 13 15	2514	72 32 21	2515	70 51 28	2518
30	Spica ♍	W.	90 53 28	2083	92 44 54	2080	94 36 24	2078	96 27 57	2077
	Antares	W.	44 59 8	2080	46 50 38	2077	48 42 12	2075	50 33 50	2073
	Jupiter	E.	39 42 16	2088	37 50 58	2087	35 59 39	2087	34 8 20	2088
	Fomalhaut	E.	41 7 14	2530	39 26 43	2565	37 47 0	2607	36 8 15	2656
	Pegasi	E.	62 28 56	2561	60 49 8	2577	59 9 41	2594	57 30 38	2615
	ietis	E.	103 21 34	2149	101 31 50	2145	99 42 0	2143	97 52 6	2141

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 14^h, Mean Time.



This Table represents, at 14^h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals, 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other: and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc or in the shadow, of Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d.418488$. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	−0·7882	−1·2854	+9·2455	−0·8126	19 19 12·44	70	151	·413
2	0·7667	1·2878	9·2544	0·8122	19 15 16·53	71	152	·416
3	0·7440	1·2901	9·2631	0·8119	19 11 20·61	72	153	·419
4	−0·7199	−1·2923	+9·2717	−0·8116	19 7 24·70	73	154	·422
5	0·6943	1·2944	9·2802	0·8113	19 3 28·79	74	155	·424
6	0·6669	1·2963	9·2885	0·8110	18 59 32·88	75	156	·427
7	−0·6375	−1·2981	+9·2968	−0·8108	18 55 36·96	76	157	·430
8	0·6059	1·2997	9·3049	0·8107	18 51 41·05	77	158	·433
9	0·5717	1·3013	9·3129	0·8105	18 47 45·14	78	159	·435
10	−0·5344	−1·3027	+9·3207	−0·8105	18 43 49·23	79	160	·438
11	0·4936	1·3040	9·3284	0·8104	18 39 53·31	80	161	·441
12	0·4483	1·3051	9·3360	0·8104	18 35 57·40	81	162	·444
13	−0·3976	−1·3062	+9·3435	−0·8104	18 32 1·49	82	163	·446
14	0·3401	1·3071	9·3509	0·8105	18 28 5·58	83	164	·449
15	0·2736	1·3079	9·3582	0·8106	18 24 9·67	84	165	·452
16	−0·1951	−1·3085	+9·3654	−0·8107	18 20 13·75	85	166	·454
17	0·0989	1·3091	9·3725	0·8109	18 16 17·84	86	167	·457
18	9·9751	1·3095	9·3794	0·8111	18 12 21·93	87	168	·460
19	−9·8010	−1·3098	+9·3862	−0·8114	18 8 26·01	88	169	·463
20	9·5059	1·3100	9·3930	0·8117	18 4 30·10	89	170	·465
21	−7·9404	1·3101	9·3996	0·8120	18 0 34·19	90	171	·468
22	+9·4815	−1·3100	+9·4062	−0·8124	17 56 38·28	91	172	·471
23	9·7887	1·3098	9·4126	0·8128	17 52 42·36	92	173	·474
24	9·9667	1·3095	9·4189	0·8133	17 48 46·45	93	174	·476
25	+0·0925	−1·3091	+9·4252	−0·8138	17 44 50·54	94	175	·479
26	0·1898	1·3086	9·4313	0·8143	17 40 54·62	95	176	·482
27	0·2692	1·3079	9·4374	0·8149	17 36 58·71	96	177	·485
28	+0·3361	−1·3071	+9·4434	−0·8155	17 33 2·80	97	178	·487
29	0·3940	1·3062	9·4493	0·8161	17 29 6·89	98	179	·490
30	0·4450	1·3052	9·4551	0·8168	17 25 10·97	99	180	·493
31	+0·4905	−1·3041	+9·4608	−0·8175	17 21 15·06	100	181	·496

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be added to Apparent Time.*
		h m s	s	° ′ ″	″	m s	m s
Sun.	1	6 39 17·78	10·337	N.23 9 8·4	10·22	1 8·79	3 23·34
Mon.	2	6 43 25·86	10·326	23 5 3·2	11·23	1 8·75	3 34·83
Tues.	3	6 47 33·69	10·314	23 0 33·9	12·23	1 8·71	3 46·06
Wed.	4	6 51 41·24	10·302	22 55 40·4	13·23	1 8·67	3 57·03
Thur.	5	6 55 48·51	10·290	22 50 23·1	14·22	1 8·63	4 7·71
Frid.	6	6 59 55·47	10·276	22 44 41·8	15·21	1 8·58	4 18·08
Sat.	7	7 4 2·10	10·262	22 38 36·9	16·19	1 8·53	4 28·12
Sun.	8	7 8 8·38	10·247	22 32 8·4	17·17	1 8·48	4 37·82
Mon.	9	7 12 14·30	10·231	22 25 16·5	18·14	1 8·42	4 47·16
Tues.	10	7 16 19·84	10·214	22 18 1·2	19·10	1 8·36	4 56·12
Wed.	11	7 20 24·98	10·196	22 10 22·9	20·05	1 8·30	5 4·68
Thur.	12	7 24 29·69	10·177	22 2 21·6	21·00	1 8·24	5 12·81
Frid.	13	7 28 33·96	10·158	21 53 57·5	21·94	1 8·18	5 20·49
Sat.	14	7 32 37·76	10·138	21 45 10·9	22·88	1 8·11	5 27·72
Sun.	15	7 36 41·08	10·118	21 36 2·0	23·80	1 8·04	5 34·46
Mon.	16	7 40 43·90	10·096	21 26 30·8	24·71	1 7·97	5 40·70
Tues.	17	7 44 46·20	10·074	21 16 37·8	25·61	1 7·90	5 46·43
Wed.	18	7 48 47·97	10·051	21 6 23·1	26·50	1 7·83	5 51·63
Thur.	19	7 52 49·19	10·028	20 55 46·9	27·39	1 7·75	5 56·28
Frid.	20	7 56 49·85	10·004	20 44 49·6	28·27	1 7·67	6 0·38
Sat.	21	8 0 49·95	9·979	20 33 31·3	29·13	1 7·60	6 3·90
Sun.	22	8 4 49·45	9·955	20 21 52·3	29·98	1 7·52	6 6·83
Mon.	23	8 8 48·37	9·930	20 9 52·9	30·81	1 7·44	6 9·19
Tues.	24	8 12 46·69	9·905	19 57 33·4	31·64	1 7·35	6 10·95
Wed.	25	8 16 44·41	9·880	19 44 53·9	32·46	1 7·27	6 12·11
Thur.	26	8 20 41·54	9·855	19 31 54·8	33·27	1 7·19	6 12·68
Frid.	27	8 24 38·06	9·830	19 18 36·2	34·07	1 7·10	6 12·64
Sat.	28	8 28 33·97	9·805	19 4 58·6	34·86	1 7·02	6 12·00
Sun.	29	8 32 29·28	9·780	18 51 2·1	35·63	1 6·93	6 10·76
Mon.	30	8 36 24·00	9·755	18 36 47·1	36·40	1 6·84	6 8·92
Tues.	31	8 40 18·11	9·730	18 22 13·6	37·15	1 6·76	6 6·49
Wed.	32	8 44 11·63		N.18 7 22·1		1 6·67	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0·

AT MEAN NOON.

Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be subtracted from Mean Time.*	Sidereal Time.
	h m s	° ′ ″	′ ″	m s	h m s
1	6 39 17·20	N.23 9 9·0	15 46·0	3 23·31	6 35 53·89
2	6 43 25·25	23 5 3·9	15 46·0	3 34·80	6 39 50·45
3	6 47 33·04	23 0 34·6	15 46·0	3 46·03	6 43 47·01
4	6 51 40·56	22 55 41·3	15 46·0	3 57·00	6 47 43·56
5	6 55 47·80	22 50 24·0	15 46·0	4 7·68	6 51 40·12
6	6 59 54·73	22 44 42·9	15 46·0	4 18·05	6 55 36·68
7	7 4 1·33	22 38 38·1	15 46·0	4 28·09	6 59 33·24
8	7 8 7·59	22 32 9·7	15 46·0	4 37·79	7 3 29·80
9	7 12 13·48	22 25 17·9	15 46·0	4 47·13	7 7 26·36
10	7 16 19·00	22 18 2·8	15 46·1	4 56·09	7 11 22·91
11	7 20 24·12	22 10 24·6	15 46·1	5 4·65	7 15 19·47
12	7 24 28·81	22 2 23·4	15 46·2	5 12·78	7 19 16·03
13	7 28 33·05	21 53 59·5	15 46·2	5 20·46	7 23 12·59
14	7 32 36·84	21 45 13·0	15 46·3	5 27·69	7 27 9·15
15	7 36 40·14	21 36 4·2	15 46·3	5 34·44	7 31 5·70
16	7 40 42·94	21 26 33·2	15 46·4	5 40·68	7 35 2·26
17	7 44 45·23	21 16 40·3	15 46·4	5 46·41	7 38 58·82
18	7 48 46·99	21 6 25·7	15 46·5	5 51·61	7 42 55·38
19	7 52 48·20	20 55 49·7	15 46·6	5 56·26	7 46 51·94
20	7 56 48·85	20 44 52·4	15 46·7	6 0·36	7 50 48·49
21	8 0 48·93	20 33 34·2	15 46·7	6 3·88	7 54 45·05
22	8 4 48·43	20 21 55·4	15 46·8	6 6·82	7 58 41·61
23	8 8 47·35	20 9 56·1	15 46·9	6 9·18	8 2 38·17
24	8 12 45·67	19 57 36·6	15 47·0	6 10·95	8 6 34·72
25	8 16 43·39	19 44 57·2	15 47·1	6 12·11	8 10 31·28
26	8 20 40·52	19 31 58·2	15 47·2	6 12·68	8 14 27·84
27	8 24 37·04	19 18 39·8	15 47·3	6 12·65	8 18 24·40
28	8 28 32·96	19 5 2·2	15 47·4	6 12·01	8 22 20·95
29	8 32 28·28	18 51 5·8	15 47·5	6 10·77	8 26 17·51
30	8 36 23·00	18 36 50·8	15 47·7	6 8·93	8 30 14·07
31	8 40 17·12	18 22 17·4	15 47·8	6 6·50	8 34 10·62
	8 44 10·64	N.18 7 26·0	15 47·9	6 3·46	8 38 7·18

* For *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent*		Logarithm of the Radius Vector of the Earth.	THE MOON'S			
	Longitude.	Latitude.		Semidiameter.		Horizontal Parall	
	Noon.	*Noon.*	*Noon.*	*Noon.*	*Midnight.*	*Noon.*	*Midn*
	° ′ ″	″		′ ″	′ ″	′ ″	′
1	99 1 25·4	S. 0·38	0·0072053	16 33·4	16 33·5	60 38·4	60 3
2	99 58 36·1	0·39	0·0072086	16 32·5	16 30·6	60 35·1	60 2
3	100 55 46·9	0·36	0·0072104	16 27·7	16 24·2	60 17·8	60
4	101 52 58·0	0·30	0·0072107	16 19·9	16 15·2	59 49·1	59 3
5	102 50 9·4	0·22	0·0072092	16 10·0	16 4·7	59 12·9	58 5
6	103 47 21·1	S. 0·11	0·0072058	15 59·2	15 53·7	58 33·2	58 1
7	104 44 33·1	N. 0·01	0·0072005	15 48·1	15 42·7	57 52·6	57 3
8	105 41 45·6	0·15	0·0071931	15 37·4	15 32·4	57 13·4	56 5
9	106 38 58·6	0·29	0·0071835	15 27·5	15 22·9	56 37·0	56 2
10	107 36 12·1	0·42	0·0071715	15 18·4	15 14·3	56 3·9	55 4
11	108 33 26·0	0·54	0·0071570	15 10·3	15 6·6	55 34·2	55 2
12	109 30 40·4	0·65	0·0071400	15 3·2	14 59·9	55 7·9	54 5
13	110 27 55·2	0·73	0·0071205	14 57·0	14 54·3	54 45·3	54 3
14	111 25 10·4	0·79	0·0070985	14 51·9	14 49·9	54 26·8	54 1
15	112 22 26·0	0·81	0·0070739	14 48·2	14 46·8	54 13·0	54
16	113 19 41·9	0·81	0·0070465	14 45·8	14 45·2	54 4·3	54
17	114 16 58·1	0·78	0·0070165	14 45·1	14 45·5	54 1·8	54
18	115 14 14·6	0·71	0·0069842	14 46·4	14 47·9	54 6·6	54 1
19	116 11 31·3	0·63	0·0069495	14 49·9	14 52·5	54 19·4	54 2
20	117 8 48·4	0·52	0·0069125	14 55·8	14 59·7	54 41·0	54 5
21	118 6 5·8	0·40	0·0068734	15 4·3	15 9·4	55 11·9	55 3
22	119 3 23·4	0·27	0·0068323	15 15·2	15 21·5	55 52·0	56 1
23	120 0 41·3	0·14	0·0067893	15 28·4	15 35·7	56 40·2	57
24	120 57 59·6	N. 0·01	0·0067446	15 43·3	15 51·1	57 34·9	58
25	121 55 18·4	S. 0·10	0·0066983	15 59·0	16 6·7	58 32·5	59
26	122 52 37·7	0·19	0·0066504	16 14·2	16 21·2	59 28·1	59 5
27	123 49 57·6	0·26	0·0066011	16 27·4	16 32·9	60 16·6	60 3
28	124 47 18·1	0·30	0·0065507	16 37·3	16 40·6	60 52·9	61
29	125 44 39·4	0·31	0·0064990	16 42·7	16 43·5	61 12·5	61 1
30	126 42 1·5	0·28	0·0064460	16 43·0	16 41·2	61 13·6	61
31	127 39 24·6	0·23	0·0063916	16 38·3	16 34·2	60 56·3	60 4
32	128 36 48·7	S. 0·16	0·0063359	16 29·3	16 23·		

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
un.	1	300 21 59·5	307 50 58·7	S. 4 59 5·2	S. 5 3 55·0	16·9	14 14·3
on.	2	315 19 15·7	322 45 46·5	5 3 33·1	4 58 3·2	17·9	15 12·7
ues.	3	330 9 33·0	337 29 46·0	4 47 35·5	4 32 27·8	18·9	16 6·5
Ved.	4	344 45 46·4	351 57 5·0	4 13 3·2	3 49 49·4	19·9	16 56·5
hur.	5	359 3 22·3	6 4 28·7	3 23 16·5	2 53 57·0	20·9	17 44·1
rid.	6	13 0 22·0	19 51 7·5	2 22 23·8	1 49 9·6	21·9	18 30·7
at.	7	26 36 55·5	33 18 0·3	1 14 46·9	S. 0 39 46·6	22·9	19 17·6
un.	8	39 54 38·6	46 27 9·1	S. 0 4 38·1	N. 0 30 10·9	23·9	20 5·8
on.	9	52 55 50·0	59 20 59·9	N. 1 4 13·9	1 37 7·3	24·9	20 55·9
ues.	10	65 42 56·1	72 1 54·1	2 8 28·6	2 37 57·4	25·9	21 47·9
Ved.	11	78 18 7·7	84 31 49·4	3 5 15·7	3 30 7·1	26·9	22 41·1
hur.	12	90 43 9·2	96 52 16·2	3 52 17·7	4 11 35·4	27·9	23 34·3
rid.	13	102 59 17·9	109 4 21·9	4 27 50·7	4 40 55·7	28·9	☌
at.	14	115 7 34·8	121 9 4·3	4 50 45·4	4 57 16·2	0·3	0 25·9
un.	15	127 8 58·6	133 7 27·4	5 0 26·9	5 0 18·4	1·3	1 15·1
on.	16	139 4 42·3	145 0 57·1	4 56 52·6	4 50 13·7	2·3	2 1·2
ues.	17	150 56 27·9	156 51 33·8	4 40 27·0	4 27 39·1	3·3	2 44·6
Ved.	18	162 46 36·5	168 42 0·8	4 11 57·4	3 53 30·8	4·3	3 25·7
hur.	19	174 38 13·9	180 35 46·4	3 32 28·9	3 9 1·9	5·3	4 5·7
rid.	20	186 35 10·7	192 37 1·9	2 43 21·6	2 15 40·0	6·3	4 45·4
at.	21	198 41 56·3	204 50 32·4	1 46 11·3	1 15 10·3	7·3	5 26·0
un.	22	211 3 28·1	217 21 21·4	N. 0 42 53·6	N. 0 9 39·9	8·3	6 8·9
on.	23	223 44 49·7	230 14 26·4	S. 0 24 9·8	S. 0 58 12·1	9·3	6 55·4
ues.	24	236 50 42·0	243 34 0·9	1 32 1·5	2 5 8·7	10·3	7 46·7
Ved.	25	250 24 40·1	257 22 47·5	2 37 2·5	3 7 9·2	11·3	8 43·5
hur.	26	264 28 19·6	271 41 0·7	3 34 53·5	3 59 39·5	12·3	9 45·4
rid.	27	279 0 21·4	286 25 38·6	4 20 51·4	4 37 56·6	13·3	10 50·4
at.	28	293 55 55·6	301 30 4·2	4 50 26·1	4 57 57·3	14·3	11 55·3
un.	29	309 6 46·7	316 44 39·7	5 0 14·5	4 57 11·5	15·3	12 57·2
on.	30	324 22 18·5	331 58 19·7	4 48 50·5	4 35 24·0	16·3	13 54·7
ues.	31	339 31 26·4	347 0 31·0	4 17 12·2	3 54 42·8	17·3	14 48·0
Ved	32	354 24 37·2	1 43 1·8	S. 3 28 28·5	S. 2 59 5·8	18·3	15 38·2

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 1.		
	h m s	° ′ ″	″
0	20 14 58·44	S. 24 57 16·8	77·62
1	20 17 39·22	24 49 31·1	79·40
2	20 20 19·66	24 41 34·7	81·18
3	20 22 59·76	24 33 27·6	82·95
4	20 25 39·51	24 25 9·9	84·70
5	20 28 18·91	24 16 41·7	86·42
6	20 30 57·94	24 8 3·2	88·13
7	20 33 36·60	23 59 14·4	89·82
8	20 36 14·89	23 50 15·5	91·50
9	20 38 52·80	23 41 6·5	93·17
10	20 41 30·32	23 31 47·5	94·80
11	20 44 7·45	23 22 18·7	96·42
12	20 46 44·19	23 12 40·2	98·03
13	20 49 20·52	23 2 52·0	99·60
14	20 51 56·44	22 52 54·4	101·18
15	20 54 31·95	22 42 47·3	102·72
16	20 57 7·04	22 32 31·0	104·25
17	20 59 41·72	22 22 5·5	105·75
18	21 2 15·97	22 11 31·0	107·23
19	21 4 49·80	22 0 47·6	108·72
20	21 7 23·20	21 49 55·3	110·15
21	21 9 56·17	21 38 54·4	111·58
22	21 12 28·71	21 27 44·9	112·98
23	21 15 0·81	S. 21 16 27·0	114·38
	MONDAY 2.		
0	21 17 32·47	S. 21 5 0·7	115·73
1	21 20 3·69	20 53 26·3	117·08
2	21 22 34·48	20 41 43·8	118·42
3	21 25 4·82	20 29 53·3	119·70
4	21 27 34·72	20 17 55·1	121·00
5	21 30 4·17	20 5 49·1	122·25
6	21 32 33·18	19 53 35·6	123·48
7	21 35 1·74	19 41 14·7	124·72
8	21 37 29·86	19 28 46·4	125·92
9	21 39 57·54	19 16 10·9	127·10
10	21 42 24·77	19 3 28·3	128·25
11	21 44 51·55	18 50 38·8	129·38
12	21 47 17·89	18 37 42·5	130·50
13	21 49 43·79	18 24 39·5	131·60
14	21 52 9·24	18 11 29·9	132·67
15	21 54 34·25	17 58 13·9	133·72
16	21 56 58·83	17 44 51·6	134·75
17	21 59 22·96	17 31 23·1	135·77
18	22 1 46·66	17 17 48·5	136·75
19	22 4 9·93	17 4 8·0	137·72
20	22 6 32·77	16 50 21·7	138·67
21	22 8 55·17	16 36 29·7	139·60
22	22 11 17·15	16 22 32·1	140·50
23	22 13 38·70	16 8 29·1	141·40
24	22 15 59·83	S. 15 54 20·7	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 3.		
	h m s	° ′ ″	″
0	22 15 59·83	S. 15 54 20·7	141
1	22 18 20·54	15 40 7·2	143
2	22 20 40·84	15 25 48·5	144
3	22 23 0·72	15 11 25·0	146
4	22 25 20·19	14 56 56·6	147
5	22 27 39·26	14 42 23·5	148
6	22 29 57·92	14 27 45·8	149
7	22 32 16·18	14 13 3·6	149
8	22 34 34·05	13 58 17·1	150
9	22 36 51·52	13 43 26·3	151
10	22 39 8·61	13 28 31·5	152
11	22 41 25·32	13 13 32·6	153
12	22 43 41·64	12 58 29·8	154
13	22 45 57·59	12 43 23·3	155
14	22 48 13·17	12 28 13·1	156
15	22 50 28·37	12 12 59·4	157
16	22 52 43·22	11 57 42·2	158
17	22 54 57·71	11 42 21·8	159
18	22 57 11·84	11 26 58·1	159
19	22 59 25·63	11 11 31·3	160
20	23 1 39·07	10 56 1·6	161
21	23 3 52·17	10 40 29·0	162
22	23 6 4·94	10 24 53·6	163
23	23 8 17·38	S. 10 9 15·6	164
	WEDNESDAY 4.		
0	23 10 29·49	S. 9 53 35·0	165
1	23 12 41·28	9 37 52·0	166
2	23 14 52·76	9 22 6·6	167
3	23 17 3·93	9 6 19·0	168
4	23 19 14·80	8 50 29·3	168
5	23 21 25·36	8 34 37·6	169
6	23 23 35·64	8 18 43·9	170
7	23 25 45·62	8 2 48·4	171
8	23 27 55·32	7 46 51·2	172
9	23 30 4·74	7 30 52·3	173
10	23 32 13·88	7 14 51·9	174
11	23 34 22·76	6 58 50·1	175
12	23 36 31·38	6 42 47·0	176
13	23 38 39·74	6 26 42·6	176
14	23 40 47·85	6 10 37·1	177
15	23 42 55·71	5 54 30·5	178
16	23 45 3·33	5 38 23·0	179
17	23 47 10·72	5 22 14·7	180
18	23 49 17·87	5 6 5·5	181
19	23 51 24·81	4 49 55·7	182
20	23 53 31·52	4 33 45·3	183
21	23 55 38·02	4 17	
22	23 57 44·32	4	
23	23 59 50·41		
24	0 1 56·31	S.	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 5.				*SATURDAY 7.*		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	0 1 56·31	S. 3 28 59·7	162·00	0	1 40 34·50	N. 9 6 41·6	147·90
1	0 4 2·02	3 12 47·7	162·00	1	1 42 37·29	9 21 29·0	147·32
2	0 6 7·54	2 56 35·7	162·00	2	1 44 40·15	9 36 12·9	146·72
3	0 8 12·88	2 40 23·7	161·98	3	1 46 43·06	9 50 53·2	146·13
4	0 10 18·05	2 24 11·8	161·93	4	1 48 46·05	10 5 30·0	145·50
5	0 12 23·05	2 8 0·2	161·90	5	1 50 49·11	10 20 3·0	144·90
6	0 14 27·89	1 51 48·8	161·83	6	1 52 52·24	10 34 32·4	144·25
7	0 16 32·57	1 35 37·8	161·75	7	1 54 55·45	10 48 57·9	143·62
8	0 18 37·09	1 19 27·3	161·67	8	1 56 58·74	11 3 19·6	142·97
9	0 20 41·47	1 3 17·3	161·57	9	1 59 2·12	11 17 37·4	142·30
10	0 22 45·71	0 47 7·9	161·45	10	2 1 5·59	11 31 51·2	141·63
11	0 24 49·82	0 30 59·2	161·32	11	2 3 9·16	11 46 1·0	140·93
12	0 26 53·79	S. 0 14 51·3	161·17	12	2 5 12·83	12 0 6·6	140·25
13	0 28 57·64	N. 0 1 15·7	161·02	13	2 7 16·60	12 14 8·1	139·53
14	0 31 1·37	0 17 21·8	160·85	14	2 9 20·47	12 28 5·3	138·82
15	0 33 4·98	0 33 26·9	160·65	15	2 11 24·46	12 41 58·2	138·10
16	0 35 8·49	0 49 30·8	160·47	16	2 13 28·56	12 55 46·8	137·37
17	0 37 11·89	1 5 33·6	160·27	17	2 15 32·78	13 9 31·0	136·62
18	0 39 15·20	1 21 35·2	160·03	18	2 17 37·12	13 23 10·7	135·87
19	0 41 18·41	1 37 35·4	159·80	19	2 19 41·58	13 36 45·9	135·08
20	0 43 21·54	1 53 34·2	159·57	20	2 21 46·17	13 50 16·4	134·32
21	0 45 24·58	2 9 31·6	159·30	21	2 23 50·89	14 3 42·3	133·53
22	0 47 27·54	2 25 27·4	159·03	22	2 25 55·75	14 17 3·5	132·73
23	0 49 30·44	N. 2 41 21·6	158·75	23	2 28 0·74	N.14 30 19·9	131·93
	FRIDAY 6.				*SUNDAY 8.*		
0	0 51 33·27	N. 2 57 14·1	158·45	0	2 30 5·87	N.14 43 31·5	131·12
1	0 53 36·04	3 13 4·8	158·15	1	2 32 11·14	14 56 38·2	130·28
2	0 55 38·75	3 28 53·7	157·83	2	2 34 16·56	15 9 39·9	129·45
3	0 57 41·41	3 44 40·7	157·50	3	2 36 22·13	15 22 36·6	128·60
4	0 59 44·03	4 0 25·7	157·17	4	2 38 27·86	15 35 28·2	127·75
5	1 1 46·61	4 16 8·7	156·80	5	2 40 33·73	15 48 14·7	126·88
6	1 3 49·15	4 31 49·5	156·45	6	2 42 39·76	16 0 56·0	126·00
7	1 5 51·66	4 47 28·2	156·05	7	2 44 45·96	16 13 32·0	125·12
8	1 7 54·15	5 3 4·5	155·68	8	2 46 52·31	16 26 2·7	124·22
9	1 9 56·62	5 18 38·6	155·27	9	2 48 58·82	16 38 28·0	123·32
10	1 11 59·07	5 34 10·2	154·85	10	2 51 5·51	16 50 47·9	122·40
11	1 14 1·51	5 49 39·3	154·43	11	2 53 12·36	17 3 2·3	121·48
12	1 16 3·95	6 5 5·9	154·00	12	2 55 19·38	17 15 11·2	120·53
13	1 18 6·39	6 20 29·9	153·53	13	2 57 26·57	17 27 14·4	119·60
14	1 20 8·83	6 35 51·1	153·10	14	2 59 33·94	17 39 12·0	118·63
15	1 22 11·28	6 51 9·7	152·62	15	3 1 41·49	17 51 3·8	117·68
16	1 24 13·74	7 6 25·4	152·13	16	3 3 49·21	18 2 49·9	116·70
17	1 26 16·22	7 21 38·2	151·65	17	3 5 57·12	18 14 30·1	115·72
18	1 28 18·73	7 36 48·1	151·13	18	3 8 5·20	18 26 4·4	114·73
19	1 30 21·26	7 51 54·9	150·63	19	3 10 13·47	18 37 32·8	113·73
20	1 32 23·83	8 6 58·7	150·10	20	3 12 21·92	18 48 55·2	112·72
	13	8 21 59·3	149·57	21	3 14 30·56	19 0 11·5	111·70
		8 36 56·7	149·02	22	3 16 39·38	19 11 21·7	110·67
		8 51 50·8	148·47	23	3 18 48·40	19 22 25·7	109·63
		9 6 41·6		24	3 20 57·60	N.19 33 23·5	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. for
	MONDAY 9.				*WEDNESDAY* 11.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	3 20 57·60	N.19 33 23·5	108·58	0	5 7 55·19	N.26 1 12·4	45
1	3 23 6·99	19 44 15·0	107·53	1	5 10 12·68	26 6 6·5	47
2	3 25 16·58	19 55 0·2	106·47	2	5 12 30·28	26 10 52·2	46
3	3 27 26·35	20 5 39·0	105·40	3	5 14 47·97	26 15 29·5	44
4	3 29 36·32	20 16 11·4	104·32	4	5 17 5·76	26 19 58·4	43
5	3 31 46·48	20 26 37·3	103·22	5	5 19 23·64	26 24 18·9	42
6	3 33 56·83	20 36 56·6	102·12	6	5 21 41·60	26 28 30·9	40
7	3 36 7·37	20 47 9·3	101·02	7	5 23 59·65	26 32 34·5	39
8	3 38 18·11	20 57 15·4	99·88	8	5 26 17·77	26 36 29·6	37
9	3 40 29·04	21 7 14·7	98·77	9	5 28 35·96	26 40 16·2	36
10	3 42 40·17	21 17 7·3	97·63	10	5 30 54·22	26 43 54·3	34
11	3 44 51·49	21 26 53·1	96·48	11	5 33 12·54	26 47 23·8	33
12	3 47 3·00	21 36 32·0	95·33	12	5 35 30·91	26 50 44·8	31
13	3 49 14·71	21 46 4·0	94·17	13	5 37 49·34	26 53 57·2	30
14	3 51 26·60	21 55 29·0	93·00	14	5 40 7·81	26 57 1·1	28
15	3 53 38·70	22 4 47·0	91·82	15	5 42 26·32	26 59 56·4	27
16	3 55 50·98	22 13 57·9	90·63	16	5 44 44·86	27 2 43·0	26
17	3 58 3·45	22 23 1·7	89·45	17	5 47 3·44	27 5 21·1	24
18	4 0 16·11	22 31 58·4	88·23	18	5 49 22·04	27 7 50·6	23
19	4 2 28·96	22 40 47·8	87·03	19	5 51 40·66	27 10 11·5	22
20	4 4 42·00	22 49 30·0	85·82	20	5 53 59·29	27 12 23·7	20
21	4 6 55·23	22 58. 4·9	84·58	21	5 56 17·94	27 14 27·4	19
22	4 9 8·64	23 6 32·4	83·35	22	5 58 36·58	27 16 22·4	17
23	4 11 22·23	N.23 14 52·5	82·12	23	6 0 55·23	N.27 18 8·8	16
	TUESDAY 10.				*THURSDAY* 12.		
0	4 13 36·01	N.23 23 5·2	80·87	0	6 3 13·86	N.27 19 46·5	14
1	4 15 49·97	23 31 10·4	79·62	1	6 5 32·48	27 21 15·6	13
2	4 18 4·11	23 39 8·1	78·35	2	6 7 51·08	27 22 36·1	11
3	4 20 18·42	23 46 58·2	77·08	3	6 10 9·66	27 23 48·0	10
4	4 22 32·91	23 54 40·7	75·82	4	6 12 28·21	27 24 51·3	9
5	4 24 47·57	24 2 15·6	74·52	5	6 14 46·72	27 25 46·0	7
6	4 27 2·39	24 9 42·7	73·23	6	6 17 5·19	27 26 32·0	6
7	4 29 17·39	24 17 2·1	71·93	7	6 19 23·61	27 27 9·5	4
8	4 31 32·55	24 24 13·7	70·63	8	6 21 41·98	27 27 38·3	3
9	4 33 47·88	24 31 17·5	69·33	9	6 24 0·29	27 27 58·6	1
10	4 36 3·36	24 38 13·5	68·02	10	6 26 18·54	27 28 10·3	0
11	4 38 19·00	24 45 1·6	66·68	11	6 28 36·72	27 28 13·5	0
12	4 40 34·80	24 51 41·7	65·37	12	6 30 54·82	27 28 8·1	2
13	4 42 50·75	24 58 13·9	64·02	13	6 33 12·84	27 27 54·2	3
14	4 45 6·84	25 4 38·0	62·70	14	6 35 30·77	27 27 31·7	5
15	4 47 23·08	25 10 54·2	61·33	15	6 37 48·62	27 27 0·3	6
16	4 49 39·46	25 17 2·2	60·00	16	6 40 6·37	27 26 21·4	7
17	4 51 55·98	25 23 2·2	58·63	17	6 42 24·01	27 25 33·5	9
18	4 54 12·64	25 28 54·0	57·27	18	6 44 41·54	27 24 37·2	10
19	4 56 29·43	25 34 37·6	55·92	19	6 46 58·96	27 23 32·5	12
20	4 58 46·34	25 40 13·1	54·53	20	6 49 16·27	27 22 19·4	13
21	5 1 3·38	25 45 40·3	53·17	21	6 51 33·45	27 20 57·9	14
22	5 3 20·53	25 50 59·3	51·78	22	6 53 50·50	27 19 28·1	16
23	5 5 37·80	25 56 10·0	50·40	23	6 56 7·41	27 17 49·9	17
24	5 7 55·19	N.26 1 12·4		24	6 58 24·19	N.27 16 3·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
FRIDAY 13.				*SUNDAY* 15.		
h m s	° ′ ″	″		h m s	° ′ ″	″
6 58 24·19	N.27 16 3·4	19·12	0	8 43 44·47	N.23 20 21·9	77·37
7 0 40·82	27 14 8·7	20·50	1	8 45 49·83	23 12 37·7	78·37
7 2 57·31	27 12 5·7	21·87	2	8 47 54·91	23 4 47·5	79·37
7 5 13·64	27 9 54·5	23·23	3	8 49 59·70	22 56 51·3	80·37
7 7 29·81	27 7 35·1	24·58	4	8 52 4·21	22 48 49·1	81·35
7 9 45·81	27 5 7·6	25·95	5	8 54 8·43	22 40 41·0	82·32
7 12 1·65	27 2 31·9	27·28	6	8 56 12·36	22 32 27·1	83·28
7 14 17·31	26 59 48·2	28·63	7	8 58 16·01	22 24 7·4	84·25
7 16 32·80	26 56 56·4	29·97	8	9 0 19·37	22 15 41·9	85·18
7 18 48·10	26 53 56·6	31·28	9	9 2 22·44	22 7 10·8	86·13
7 21 3·22	26 50 48·9	32·63	10	9 4 25·23	21 58 34·0	87·05
7 23 18·14	26 47 33·1	33·93	11	9 6 27·73	21 49 51·7	87·97
7 25 32·87	26 44 9·5	35·25	12	9 8 29·95	21 41 3·9	88·88
7 27 47·40	26 40 38·0	36·55	13	9 10 31·88	21 32 10·6	89·78
7 30 1·72	26 36 58·7	37·87	14	9 12 33·53	21 23 11·9	90·67
7 32 15·84	26 33 11·5	39·13	15	9 14 34·90	21 14 7·9	91·55
7 34 29·74	26 29 16·7	40·43	16	9 16 35·98	21 4 58·6	92·43
7 36 43·43	26 25 14·1	41·72	17	9 18 36·78	20 55 44·0	93·28
7 38 56·90	26 21 3·8	42·97	18	9 20 37·31	20 46 24·3	94·13
7 41 10·15	26 16 46·0	44·25	19	9 22 37·55	20 36 59·5	95·00
7 43 23·16	26 12 20·5	45·50	20	9 24 37·51	20 27 29·5	95·82
7 45 35·95	26 7 47·5	46·75	21	9 26 37·20	20 17 54·6	96·65
7 47 48·51	26 3 7·0	48·00	22	9 28 36·61	20 8 14·7	97·47
7 50 0·82	N.25 58 19·0	49·22	23	9 30 35·75	N.19 58 29·9	98·28
SATURDAY 14.				*MONDAY* 16.		
7 52 12·90	N.25 53 23·7	50·45	0	9 32 34·62	N.19 48 40·2	99·08
7 54 24·74	25 48 21·0	51·67	1	9 34 33·21	19 38 45·7	99·87
7 56 36·33	25 43 11·0	52·88	2	9 36 31·54	19 28 46·5	100·65
7 58 47·67	25 37 53·7	54·08	3	9 38 29·59	19 18 42·6	101·42
8 0 58·75	25 32 29·2	55·28	4	9 40 27·38	19 8 34·1	102·18
8 3 9·59	25 26 57·5	56·47	5	9 42 24·91	18 58 21·0	102·95
8 5 20·17	25 21 18·7	57·65	6	9 44 22·17	18 48 3·3	103·68
8 7 30·49	25 15 32·8	58·80	7	9 46 19·17	18 37 41·2	104·42
8 9 40·55	25 9 40·0	59·98	8	9 48 15·91	18 27 14·7	105·15
8 11 50·34	25 3 40·1	61·12	9	9 50 12·40	18 16 43·8	105·88
8 13 59·87	24 57 33·4	62·28	10	9 52 8·63	18 6 8·5	106·58
8 16 9·14	24 51 19·7	63·40	11	9 54 4·60	17 55 29·0	107·28
8 18 18·13	24 44 59·3	64·53	12	9 56 0·33	17 44 45·3	107·98
8 20 26·85	24 38 32·1	65·65	13	9 57 55·81	17 33 57·4	108·67
8 22 35·30	24 31 58·2	66·77	14	9 59 51·04	17 23 5·4	109·33
8 24 43·47	24 25 17·6	67·85	15	10 1 46·03	17 12 9·4	110·02
8 26 51·37	24 18 30·5	68·95	16	10 3 40·78	17 1 9·3	110·67
8 28 58·99	24 11 36·8	70·03	17	10 5 35·29	16 50 5·3	111·32
8 31 6·34	24 4 36·6	71·12	18	10 7 29·56	16 38 57·4	111·97
8 33 13·40	23 57 29·9	72·17	19	10 9 23·60	16 27 45·6	112·58
8 35 20·18	23 50 16·9	73·23	20	10 11 17·41	16 16 30·1	113·23
8 37 26·68	23 42 57·5	74·27	21	10 13 10·99	16 5 10·7	113·83
8 39 32·89	23 35 31·9	75·32	22	10 15 4·35	15 53 47·7	114·45
8 41 38·82	23 28 0·0	76·35	23	10 16 57·48	15 42 21·0	115·05
8 43 44·47	N.23 20 21·9		24	10 18 50·39	N.15 30 50·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 17.		
	h m s	° ′ ″	″
0	10 18 50·39	N.15 30 50·7	115·65
1	10 20 43·09	15 19 16·8	116·22
2	10 22 35·57	15 7 39·5	116·82
3	10 24 27·85	14 55 58·6	117·37
4	10 26 19·91	14 44 14·4	117·93
5	10 28 11·77	14 32 26·8	118·48
6	10 30 3·43	14 20 35·9	119·03
7	10 31 54·89	14 8 41·7	119·58
8	10 33 46·16	13 56 44·2	120·10
9	10 35 37·23	13 44 43·6	120·62
10	10 37 28·11	13 32 39·9	121·13
11	10 39 18·81	13 20 33·1	121·65
12	10 41 9·33	13 8 23·2	122·15
13	10 42 59·67	12 56 10·3	122·63
14	10 44 49·83	12 43 54·5	123·12
15	10 46 39·82	12 31 35·8	123·58
16	10 48 29·64	12 19 14·3	124·07
17	10 50 19·30	12 6 49·9	124·52
18	10 52 8·79	11 54 22·8	124·98
19	10 53 58·13	11 41 52·9	125·42
20	10 55 47·32	11 29 20·4	125·87
21	10 57 36·35	11 16 45·2	126·30
22	10 59 25·23	11 4 7·4	126·72
23	11 1 13·98	N.10 51 27·1	127·13
	WEDNESDAY 18.		
0	11 3 2·58	N.10 38 44·3	127·55
1	11 4 51·05	10 25 59·0	127·95
2	11 6 39·38	10 13 11·3	128·33
3	11 8 27·59	10 0 21·3	128·73
4	11 10 15·67	9 47 28·9	129·12
5	11 12 3·63	9 34 34·2	129·48
6	11 13 51·47	9 21 37·3	129·85
7	11 15 39·20	9 8 38·2	130·22
8	11 17 26·82	8 55 36·9	130·57
9	11 19 14·34	8 42 33·5	130·92
10	11 21 1·76	8 29 28·0	131·25
11	11 22 49·08	8 16 20·5	131·58
12	11 24 36·30	8 3 11·0	131·90
13	11 26 23·43	7 49 59·6	132·23
14	11 28 10·48	7 36 46·2	132·53
15	11 29 57·45	7 23 31·0	132·85
16	11 31 44·35	7 10 13·9	133·15
17	11 33 31·16	6 56 55·0	133·43
18	11 35 17·91	6 43 34·4	133·72
19	11 37 4·60	6 30 12·1	134·00
20	11 38 51·22	6 16 48·1	134·27
21	11 40 37·79	6 3 22·5	134·53
22	11 42 24·30	5 49 55·3	134·80
23	11 44 10·77	5 36 26·5	135·05
24	11 45 57·20	N. 5 22 56·2	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 19.		
	h m s	° ′ ″	″
0	11 45 57·20	N. 5 22 56·2	135
1	11 47 43·59	5 9 24·4	135
2	11 49 29·94	4 55 51·2	135
3	11 51 16·26	4 42 16·6	135
4	11 53 2·55	4 28 40·7	136
5	11 54 48·82	4 15 3·4	136
6	11 56 35·07	4 1 24·9	136
7	11 58 21·31	3 47 45·2	136
8	12 0 7·54	3 34 4·2	137
9	12 1 53·77	3 20 22·1	137
10	12 3 40·00	3 6 38·9	137
11	12 5 26·23	2 52 54·6	137
12	12 7 12·47	2 39 9·3	137
13	12 8 58·72	2 25 23·0	137
14	12 10 44·99	2 11 35·8	138
15	12 12 31·28	1 57 47·6	138
16	12 14 17·60	1 43 58·6	138
17	12 16 3·95	1 30 8·8	138
18	12 17 50·34	1 16 18·1	138
19	12 19 36·77	1 2 26·7	138
20	12 21 23·24	0 48 34·6	138
21	12 23 9·76	0 34 41·8	138
22	12 24 56·34	0 20 48·4	138
23	12 26 42·97	N. 0 6 54·4	138
	FRIDAY 20.		
0	12 28 29·67	S. 0 7 0·1	138
1	12 30 16·44	0 20 55·2	138
2	12 32 3·28	0 34 50·7	138
3	12 33 50·20	0 48 46·6	138
4	12 35 37·20	1 2 43·0	138
5	12 37 24·28	1 16 39·7	138
6	12 39 11·46	1 30 36·6	138
7	12 40 58·74	1 44 33·9	139
8	12 42 46·12	1 58 31·3	139
9	12 44 33·60	2 12 29·0	139
10	12 46 21·20	2 26 26·7	139
11	12 48 8·91	2 40 24·5	139
12	12 49 56·75	2 54 22·4	139
13	12 51 44·71	3 8 20·3	139
14	12 53 32·80	3 22 18·1	139
15	12 55 21·03	3 36 15·8	139
16	12 57 9·39	3 50 13·4	139
17	12 58 57·90	4 4 10·8	139
18	13 0 46·56	4 18 7·9	139
19	13 2 35·38	4 32 4·8	139
20	13 4 24·35	4 46 1·4	139
21	13 6 13·49	4 59 57·6	139
22	13 8 2·80	5 13 53·4	139
23	13 9 52·29	5 27 48·8	139
24	13 11 41·96	S. 5 41 43·6	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
SATURDAY 21.				*MONDAY 23.*		
h m s	° ′ ″	″		h m s	° ′ ″	″
13 11 41·96	S. 5 41 43·6	139·05	0	14 44 38·37	S. 16 21 47·5	123·25
13 13 31·82	5 55 37·9	138·95	1	14 46 43·12	16 34 7·0	122·65
13 15 21·86	6 9 31·6	138·83	2	14 48 48·31	16 46 22·9	122·00
13 17 12·10	6 23 24·6	138·72	3	14 50 53·93	16 58 34·9	121·37
13 19 2·54	6 37 16·9	138·60	4	14 52 59·99	17 10 43·1	120·72
13 20 53·19	6 51 8·5	138·45	5	14 55 6·49	17 22 47·4	120·03
13 22 44·05	7 4 59·2	138·33	6	14 57 13·44	17 34 47·6	119·35
13 24 35·12	7 18 49·2	138·17	7	14 59 20·85	17 46 43·7	118·65
13 26 26·42	7 32 38·2	138·00	8	15 1 28·71	17 58 35·6	117·93
13 28 17·94	7 46 26·2	137·85	9	15 3 37·03	18 10 23·2	117·22
13 30 9·70	8 0 13·3	137·65	10	15 5 45·82	18 22 6·5	116·45
13 32 1·69	8 13 59·2	137·48	11	15 7 55·07	18 33 45·2	115·70
13 33 53·92	8 27 44·1	137·28	12	15 10 4·80	18 45 19·4	114·92
13 35 46·40	8 41 27·8	137·08	13	15 12 15·00	18 56 48·9	114·13
13 37 39·13	8 55 10·3	136·85	14	15 14 25·68	19 8 13·7	113·33
13 39 32·11	9 8 51·4	136·65	15	15 16 36·85	19 19 33·7	112·50
13 41 25·36	9 22 31·3	136·40	16	15 18 48·50	19 30 48·7	111·65
13 43 18·87	9 36 9·7	136·17	17	15 21 0·64	19 41 58·6	110·82
13 45 12·66	9 49 46·7	135·92	18	15 23 13·28	19 53 3·5	109·92
13 47 6·73	10 3 22·2	135·65	19	15 25 26·41	20 4 3·0	109·05
13 49 1·08	10 16 56·1	135·38	20	15 27 40·04	20 14 57·3	108·13
13 50 55·71	10 30 28·4	135·10	21	15 29 54·18	20 25 46·1	107·22
13 52 50·64	10 43 59·0	134·82	22	15 32 8·81	20 36 29·4	106·27
13 54 45·87	S. 10 57 27·9	134·50	23	15 34 23·96	S. 20 47 7·0	105·32
SUNDAY 22.				*TUESDAY 24.*		
13 56 41·40	S. 11 10 54·9	134·20	0	15 36 39·61	S. 20 57 38·9	104·35
13 58 37·24	11 24 20·1	133·87	1	15 38 55·78	21 8 5·0	103·35
14 0 33·39	11 37 43·3	133·53	2	15 41 12·46	21 18 25·1	102·33
14 2 29·86	11 51 4·5	133·20	3	15 43 29·66	21 28 39·1	101·32
14 4 26·65	12 4 23·7	132·83	4	15 45 47·37	21 38 47·0	100·27
14 6 23·78	12 17 40·7	132·47	5	15 48 5·61	21 48 48·6	99·22
14 8 21·24	12 30 55·5	132·10	6	15 50 24·37	21 58 43·9	98·12
14 10 19·03	12 44 8·1	131·72	7	15 52 43·65	22 8 32·6	97·03
14 12 17·17	12 57 18·4	131·30	8	15 55 3·45	22 18 14·8	95·92
14 14 15·67	13 10 26·2	130·90	9	15 57 23·78	22 27 50·3	94·78
14 16 14·51	13 23 31·6	130·48	10	15 59 44·63	22 37 19·0	93·63
14 18 13·72	13 36 34·5	130·03	11	16 2 6·01	22 46 40·8	92·47
14 20 13·29	13 49 34·7	129·60	12	16 4 27·92	22 55 55·6	91·28
14 22 13·23	14 2 32·3	129·13	13	16 6 50·36	23 5 3·3	90·07
14 24 13·54	14 15 27·1	128·67	14	16 9 13·32	23 14 3·7	88·85
14 26 14·24	14 28 19·1	128·18	15	16 11 36·81	23 22 56·8	87·60
14 28 15·32	14 41 8·2	127·68	16	16 14 0·83	23 31 42·4	86·33
14 30 16·79	14 53 54·3	127·18	17	16 16 25·37	23 40 20·4	85·07
14 32 18·65	15 6 37·4	126·67	18	16 18 50·44	23 48 50·8	83·75
14 34 20·91	15 19 17·4	126·12	19	16 21 16·04	23 57 13·3	82·45
14 36 23·58	15 31 54·1	125·58	20	16 23 42·16	24 5 28·0	81·10
14 38 26·65	15 44 27·6	125·02	21	16 26 8·80	24 13 34·6	79·75
14 40 30·14	15 56 57·7	124·45	22	16 28 35·96	24 21 33·1	78·38
14 42 34·04	16 9 24·4	123·85	23	16 31 3·65	24 29 23·4	76·98
14 44 38·37	S. 16 21 47·5		24	16 33 31·85	S. 24 37 5·3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 25.		
	h m s	° ′ ″	″
0	16 33 31·85	S. 24 37 5·3	75·57
1	16 36 0·57	24 44 38·7	74·15
2	16 38 29·80	24 52 3·6	72·70
3	16 40 59·54	24 59 19·8	71·23
4	16 43 29·79	25 6 27·2	69·73
5	16 46 0·54	25 13 25·6	68·25
6	16 48 31·79	25 20 15·1	66·72
7	16 51 3·54	25 26 55·4	65·18
8	16 53 35·78	25 33 26·5	63·62
9	16 56 8·51	25 39 48·2	62·05
10	16 58 41·72	25 46 0·5	60·45
11	17 1 15·41	25 52 3·2	58·85
12	17 3 49·58	25 57 56·3	57·22
13	17 6 24·22	26 3 39·6	55·58
14	17 8 59·31	26 9 13·1	53·90
15	17 11 34·87	26 14 36·5	52·23
16	17 14 10·88	26 19 49·9	50·53
17	17 16 47·33	26 24 53·1	48·82
18	17 19 24·22	26 29 46·0	47·10
19	17 22 1·54	26 34 28·6	45·33
20	17 24 39·28	26 39 0·6	43·58
21	17 27 17·45	26 43 22·1	41·82
22	17 29 56·02	26 47 33·0	40·00
23	17 32 34·99	S. 26 51 33·0	38·22
	THURSDAY 26.		
0	17 35 14·36	S. 26 55 22·3	36·38
1	17 37 54·12	26 59 0·6	34·53
2	17 40 34·25	27 2 27·8	32·70
3	17 43 14·75	27 5 44·0	30·82
4	17 45 55·60	27 8 48·9	28·95
5	17 48 36·81	27 11 42·6	27·05
6	17 51 18·35	27 14 24·9	25·15
7	17 54 0·23	27 16 55·8	23·22
8	17 56 42·42	27 19 15·1	21·30
9	17 59 24·93	27 21 22·9	19·35
10	18 2 7·73	27 23 19·0	17·42
11	18 4 50·82	27 25 3·5	15·43
12	18 7 34·19	27 26 36·1	13·47
13	18 10 17·83	27 27 56·9	11·47
14	18 13 1·73	27 29 5·7	9·48
15	18 15 45·87	27 30 2·6	7·48
16	18 18 30·24	27 30 47·5	5·47
17	18 21 14·84	27 31 20·3	3·45
18	18 23 59·64	27 31 41·0	1·42
19	18 26 44·65	27 31 49·5	0·62
20	18 29 29·84	27 31 45·8	2·65
21	18 32 15·20	27 31 29·9	4·70
22	18 35 0·73	27 31 1·7	6·75
23	18 37 46·40	27 30 21·2	8·82
24	18 40 32·22	S. 27 29 28·3	

Hour.	Right Ascension.	Declination.	D
	FRIDAY 27.		
	h m s	° ′ ″	
0	18 40 32·22	S. 27 29 28·3	
1	18 43 18·16	27 28 23·0	
2	18 46 4·21	27 27 5·4	
3	18 48 50·36	27 25 35·3	
4	18 51 36·60	27 23 52·8	
5	18 54 22·91	27 21 57·8	
6	18 57 9·29	27 19 50·4	
7	18 59 55·71	27 17 30·5	
8	19 2 42·17	27 14 58·1	
9	19 5 28·65	27 12 13·3	
10	19 8 15·15	27 9 15·9	
11	19 11 1·64	27 6 6·2	
12	19 13 48·12	27 2 43·9	
13	19 16 34·57	26 59 9·2	
14	19 19 20·99	26 55 22·0	
15	19 22 7·35	26 51 22·4	
16	19 24 53·65	26 47 10·5	
17	19 27 39·87	26 42 46·2	
18	19 30 26·00	26 38 9·5	
19	19 33 12·04	26 33 20·6	
20	19 35 57·97	26 28 19·4	
21	19 38 43·77	26 23 5·9	
22	19 41 29·43	26 17 40·3	
23	19 44 14·96	S. 26 12 2·6	
	SATURDAY 28.		
0	19 47 0·32	S. 26 6 12·7	
1	19 49 45·51	26 0 10·8	
2	19 52 30·53	25 53 56·9	
3	19 55 15·35	25 47 31·1	
4	19 57 59·97	25 40 53·5	
5	20 0 44·38	25 34 4·0	
6	20 3 28·57	25 27 2·9	
7	20 6 12·53	25 19 50·0	
8	20 8 56·25	25 12 25·6	
9	20 11 39·71	25 4 49·7	
10	20 14 22·92	24 57 2·3	
11	20 17 5·86	24 49 3·6	
12	20 19 48·52	24 40 53·6	
13	20 22 30·89	24 32 32·4	
14	20 25 12·97	24 24 0·1	
15	20 27 54·75	24 15 16·9	
16	20 30 36·22	24 6 22·7	
17	20 33 17·37	23 57 17·7	
18	20 35 58·19	23 48 2·0	
19	20 38 38·68	23 38 35·7	
20	20 41 18·83	23 28 58·9	
21	20 43 58·64	23 19 11·7	
22	20 46 38·10	23 9 14·2	1
23	20 49 17·19	22 59 6·6	1
24	20 51 55·93	S. 22 48 48·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 29.		
	h m s	° ′ ″	″
0	20 51 55·93	S. 22 48 48·8	104·62
1	20 54 34·29	22 38 21·1	106·25
2	20 57 12·28	22 27 43·6	107·88
3	20 59 49·89	22 16 56·3	109·47
4	21 2 27·12	22 5 59·5	111·07
5	21 5 3·96	21 54 53·1	112·62
6	21 7 40·41	21 43 37·4	114·17
7	21 10 16·47	21 32 12·4	115·68
8	21 12 52·12	21 20 38·3	117·18
9	21 15 27·37	21 8 55·2	118·67
10	21 18 2·21	20 57 3·2	120·12
11	21 20 36·64	20 45 2·5	121·57
12	21 23 10·67	20 32 53·1	122·98
13	21 25 44·28	20 20 35·2	124·37
14	21 28 17·47	20 8 9·0	125·75
15	21 30 50·25	19 55 34·5	127·08
16	21 33 22·60	19 42 52·0	128·43
17	21 35 54·54	19 30 1·4	129·72
18	21 38 26·06	19 17 3·1	131·02
19	21 40 57·15	19 3 57·0	132·28
20	21 43 27·82	18 50 43·3	133·50
21	21 45 58·06	18 37 22·3	134·73
22	21 48 27·88	18 23 53·9	135·92
23	21 50 57·28	S. 18 10 18·4	137·10
	MONDAY 30.		
0	21 53 26·25	S. 17 56 35·8	138·23
1	21 55 54·79	17 42 46·4	139·37
2	21 58 22·92	17 28 50·2	140·47
3	22 0 50·62	17 14 47·4	141·55
4	22 3 17·89	17 0 38·1	142·60
5	22 5 44·75	16 46 22·5	143·63
6	22 8 11·19	16 32 0·7	144·65
7	22 10 37·21	16 17 32·8	145·63
8	22 13 2·81	16 2 59·0	146·60
9	22 15 28·00	15 48 19·4	147·55
10	22 17 52·78	15 33 34·1	148·47
11	22 20 17·14	15 18 43·3	149·37
12	22 22 41·10	15 3 47·1	150·23
13	22 25 4·65	14 48 45·7	151·10
14	22 27 27·80	14 33 39·1	151·92
15	22 29 50·55	14 18 27·6	152·73
16	22 32 12·90	14 3 11·2	153·52
17	22 34 34·86	13 47 50·1	154·28
18	22 36 56·42	13 32 24·4	155·02
19	22 39 17·60	13 16 54·3	155·75
20	22 41 38·39	13 1 19·8	156·43
21	22 43 58·80	12 45 41·2	157·12
22	22 46 18·83	12 29 58·5	157·77
23	22 48 38·48	12 14 11·9	158·40
24	22 50 57·77	S. 11 58 21·5	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 31.		
	h m s	° ′ ″	″
0	22 50 57·77	S. 11 58 21·5	159·02
1	22 53 16·69	11 42 27·4	159·60
2	22 55 35·25	11 26 29·8	160·17
3	22 57 53·44	11 10 28·8	160·70
4	23 0 11·29	10 54 24·6	161·25
5	23 2 28·78	10 38 17·1	161·73
6	23 4 45·92	10 22 6·7	162·23
7	23 7 2·73	10 5 53·3	162·68
8	23 9 19·20	9 49 37·2	163·13
9	23 11 35·33	9 33 18·4	163·55
10	23 13 51·14	9 16 57·1	163·95
11	23 16 6·62	9 0 33·4	164·33
12	23 18 21·79	8 44 7·4	164·70
13	23 20 36·64	8 27 39·2	165·03
14	23 22 51·18	8 11 9·0	165·35
15	23 25 5·42	7 54 36·9	165·65
16	23 27 19·36	7 38 3·0	165·95
17	23 29 33·01	7 21 27·3	166·20
18	23 31 46·37	7 4 50·1	166·45
19	23 33 59·44	6 48 11·4	166·67
20	23 36 12·23	6 31 31·4	166·87
21	23 38 24·75	6 14 50·2	167·07
22	23 40 37·00	5 58 7·8	167·23
23	23 42 48·99	S. 5 41 24·4	167·38
	WEDNESDAY, AUG. 1.		
0	23 45 0·72	S. 5 24 40·1	

PHASES OF THE MOON.

		d	h	m
☾	*Last Quarter* -	6	1	28·0
●	New Moon - -	13	16	1·0
☽	*First Quarter* -	21	19	50·0
○	Full Moon - -	28	18	20·4

		d	h
☾	Perigee - - - - - -	1	7
☾	Apogee - - - - - -	16	21
☾	Perigee - - - - - -	29	13

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.I. of diff.	III^h.	P.I. of diff.	VI^h.	P.I. of diff.	IX^h.
		° ′ ″		° ′ ″		° ′ ″		° ′
1	Spica ♍ W.	98 19 32	2077	100 11 8	2077	102 2 43	2077	103 54 1
	Antares W.	52 25 31	2072	54 17 13	2072	56 8 55	2072	58 0 3
	Jupiter E.	32 17 3	2091	30 25 50	2094	28 34 42	2099	26 43 4
	α Pegasi E.	55 52 4	2640	54 14 3	2667	52 36 39	2698	50 59 5
	α Arietis E.	96 2 9	2140	94 12 10	2140	92 22 11	2140	90 32 1
2	Antares W.	67 18 23	2087	69 9 42	2092	71 0 53	2097	72 51 5
	α Pegasi E.	43 10 15	2993	41 39 53	3067	40 11 3	3151	38 43 5
	α Arietis E.	81 23 7	2158	79 33 36	2163	77 44 13	2170	75 55
	Aldebaran E.	111 43 16	2130	109 53 2	2133	108 2 53	2137	106 12 5
3	Antares W.	82 4 46	2139	83 54 46	2147	85 44 33	2156	87 34
	α Arietis E.	66 51 51	2222	65 3 56	2233	63 16 17	2245	61 28 5
	Aldebaran E.	97 4 51	2176	95 15 47	2184	93 26 55	2192	91 38 1
	Sun E.	130 35 53	2448	128 53 27	2457	127 11 13	2465	125 29 1
4	Antares W.	96 38 17	2216	98 26 20	2228	100 14 6	2239	102 1 3
	α Aquilæ W.	54 38 30	3590	55 57 15	3543	57 16 52	3502	58 37 1
	Jupiter W.	12 47 5	2365	14 31 30	2342	16 16 28	2328	18 1 4
	α Arietis E.	52 37 8	2331	50 51 53	2348	49 7 3	2366	47 22 3
	Aldebaran E.	82 38 42	2254	80 51 35	2265	79 4 44	2277	77 18 1
	Sun E.	117 2 26	2527	115 21 50	2538	113 41 29	2550	112 1 2
5	α Aquilæ W.	65 27 46	3343	66 51 8	3328	68 14 47	3316	69 38 4
	Fomalhaut W.	31 51 46	3000	33 21 59	2950	34 53 14	2910	36 25 2
	Jupiter W.	26 49 6	2335	28 34 15	2342	30 19 13	2351	32 3 5
	α Arietis E.	38 48 9	2501	37 6 57	2530	35 26 26	2561	33 46 3
	Aldebaran E.	68 30 0	2354	66 45 19	2367	65 0 57	2381	63 16 5
	Sun E.	103 45 19	2625	102 6 58	2638	100 28 55	2652	98 51 1
6	α Aquilæ W.	76 40 5	3288	78 4 30	3289	79 28 54	3293	80 53 1
	Fomalhaut W.	44 14 22	2782	45 49 14	2774	47 24 16	2767	48 59 2
	Jupiter W.	40 44 9	2412	42 27 26	2424	44 10 26	2435	45 53 1
	Aldebaran E.	54 41 55	2469	52 59 58	2484	51 18 23	2500	49 37 1
	Saturn E.	69 38 40	2463	67 56 35	2476	66 14 48	2489	64 33 2
	Mars E.	69 42 53	2635	68 4 46	2649	66 26 57	2662	64 49 2
	Sun E.	90 46 57	2733	89 11 1	2746	87 35 22	2760	86 0
7	α Aquilæ W.	87 53 11	3337	89 16 40	3348	90 39 56	3361	92 2 5
	Fomalhaut W.	56 56 7	2763	58 31 24	2766	60 6 37	2770	61 41 4
	Jupiter W.	54 22 50	2504	56 3 58	2515	57 44 50	2527	59 25 2
	α Pegasi W.	40 11 44	3488	41 32 22	3436	42 53 58	3392	44 16 2
	Aldebaran E.	41 16 52	2603	39 38 1	2623	37 59 37	2643	36 21 4
	Saturn E.	56 10 33	2568	54 30 54	2582	52 51 34	2594	51 12 3
	Mars E.	56 46 19	2742	55 10 35	2755	53 35 8	2768	51 59 5
	Sun E.	78 7 48	2842	76 34 14	2855	75 0 57	2868	73 27 5
8	α Aquilæ W.	98 53 43	3459	100 14 53	3479	101 35 41	3501	102 56 4
	Fomalhaut W.	69 35 38	2805	71 10 0	2812	72 44 12	2820	74 18 1
	Jupiter W.	67 44 29	2594	69 23 32	2604	71 2 21	2615	72 40 5
	α Pegasi W.	51 17 49	3227	52 43 26	3211	54 9 22	3198	55 35 3
	Aldebaran E.	28 19 40	2795	26 45 5	2830	25 11 16	2869	23 38
	Saturn E.	43 1 46	2674	41 24 31	2687	39 47 34	2701	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Spica ♍ W.	105 45 50	2081	107 37 19	2083	109 28 45	2086	111 20 5	2090
	Antares W.	59 52 17	2075	61 43 55	2077	63 35 29	2080	65 26 59	2084
	Jupiter E.	24 52 53	2116	23 2 18	2127	21 12 0	2141	19 22 4	2160
	α Pegasi E.	49 24 1	2774	47 48 59	2819	46 14 56	2870	44 41 59	2928
	α Arietis E.	88 42 15	2143	86 52 21	2145	85 2 31	2149	83 12 46	2153
2	Antares W.	74 42 50	2109	76 33 35	2116	78 24 10	2123	80 14 34	2131
	α Pegasi E.	37 18 40	3355	35 55 32	3480	34 34 45	3623	33 16 36	3789
	α Arietis E.	74 5 57	2184	72 17 5	2193	70 28 27	2202	68 40 2	2211
	Aldebaran E.	104 22 56	2148	102 33 10	2154	100 43 33	2161	98 54 6	2168
3	Antares W.	89 23 27	2175	91 12 32	2185	93 1 22	2195	94 49 57	2205
	α Arietis E.	59 41 54	2270	57 55 10	2284	56 8 47	2299	54 22 46	2315
	Aldebaran E.	89 49 52	2211	88 1 41	2222	86 13 46	2232	84 26 6	2243
	Sun E.	123 47 21	2484	122 5 46	2494	120 24 25	2504	118 43 18	2515
4	Antares W.	103 48 48	2262	105 35 44	2274	107 22 21	2286	109 8 41	2298
	α Aquilæ W.	59 58 17	3433	61 19 56	3406	62 42 6	3381	64 4 44	3360
	Jupiter W.	19 47 17	2318	21 32 50	2319	23 18 22	2323	25 3 48	2328
	α Arietis E.	45 38 43	2405	43 55 16	2427	42 12 20	2450	40 29 57	2475
	Aldebaran E.	75 31 56	2302	73 45 59	2314	72 0 20	2328	70 15 1	2340
	Sun E.	110 21 37	2574	108 42 7	2586	107 2 53	2599	105 23 57	2612
5	α Aquilæ W.	71 2 44	3299	72 26 57	3294	73 51 16	3290	75 15 39	3288
	Fomalhaut W.	37 58 10	2848	39 31 35	2826	41 5 29	2808	42 39 46	2794
	Jupiter W.	33 48 30	2371	35 32 47	2380	37 16 50	2391	39 0 37	2402
	α Arietis E.	32 7 39	2635	30 29 32	2678	28 52 22	2726	27 16 17	2782
	Aldebaran E.	61 33 13	2410	59 49 52	2424	58 6 52	2439	56 24 13	2454
	Sun E.	97 13 43	2678	95 36 34	2692	93 59 44	2705	92 23 11	2719
6	α Aquilæ W.	82 17 29	3302	83 41 38	3309	85 5 39	3317	86 29 31	3327
	Fomalhaut W.	50 34 44	2760	52 10 4	2759	53 45 26	2759	55 20 47	2760
	Jupiter W.	47 35 39	2458	49 17 51	2470	50 59 47	2481	52 41 27	2493
	Aldebaran E.	47 56 19	2533	46 15 52	2550	44 35 48	2567	42 56 7	2585
	Saturn E.	62 52 10	2515	61 11 18	2529	59 30 45	2542	57 50 30	2555
	Mars E.	63 12 12	2689	61 35 17	2702	59 58 40	2716	58 22 21	2729
	Sun E.	84 25 0	2787	82 50 15	2801	81 15 49	2814	79 41 40	2828
7	α Aquilæ W.	93 25 42	3389	94 48 11	3406	96 10 21	3423	97 32 12	3440
	Fomalhaut W.	63 16 46	2779	64 51 41	2785	66 26 28	2791	68 1 7	2798
	Jupiter W.	61 5 45	2550	62 45 49	2561	64 25 38	2572	66 5 11	2583
	α Pegasi W.	45 39 33	3320	47 3 21	3291	48 27 43	3267	49 52 33	3245
	Aldebaran E.	34 44 12	2686	33 7 13	2710	31 30 47	2736	29 54 55	2764
	Saturn E.	49 33 46	2621	47 55 20	2634	46 17 11	2646	44 39 19	2660
	Mars E.	50 25 6	2794	48 50 30	2807	47 16 11	2820	45 42 9	2833
	Sun E.	71 55 14	2894	70 22 47	2908	68 50 38	2920	67 18 44	2933
8	α Aquilæ W.	104 16 3	3547	105 35 35	3573	106 54 39	3599	108 13 15	3627
	Fomalhaut W.	75 52 6	2836	77 25 47	2844	78 59 18	2852	80 32 38	2861
	Jupiter W.	74 19 14	2637	75 57 19	2647	77 35 10	2657	79 12 48	2668
	α Pegasi W.	57 1 59	3178	58 28 35	3169	59 55 21	3163	61 22 14	3159
	Aldebaran E.	22 6 16	2968	20 35 23	3031	19 5 48	3108	17 37 48	3205
	Saturn E.	36 34 34	2728	34 58 31	2743	33 22 48	2757	31 47 24	2772

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
8	Mars E.	44 8 24	2845	42 34 55	2858	41 1 42	2871	39 28 46	2884
	Sun E.	65 47 7	2946	64 15 46	2958	62 44 41	2971	61 13 52	2983
9	Fomalhaut W.	82 5 47	2870	83 38 44	2879	85 11 30	2888	86 44 4	2896
	Jupiter W.	80 50 11	2677	82 27 22	2687	84 4 19	2698	85 41 2	2707
	α Pegasi W.	62 49 12	3155	64 16 15	3153	65 43 21	3152	67 10 28	3151
	Saturn E.	30 12 20	2788	28 37 36	2804	27 3 14	2822	25 29 15	2841
	Mars E.	31 48 6	2946	30 16 46	2960	28 45 43	2973	27 14 57	2987
	Sun E.	53 43 35	3044	52 14 17	3056	50 45 13	3068	49 16 24	3080
10	Fomalhaut W.	94 23 51	2946	95 55 12	2957	97 26 19	2966	98 57 14	2977
	Jupiter W.	93 41 32	2753	95 17 2	2762	96 52 20	2771	98 27 26	2780
	α Pegasi W.	74 25 58	3159	75 52 56	3163	77 19 50	3167	78 46 39	3171
	α Arietis W.	30 53 17	3037	32 22 44	3023	33 52 28	3012	35 22 26	3004
	Sun E.	41 55 56	3139	40 28 34	3151	39 1 26	3163	37 34 33	3175
16	Sun W.	26 11 21	3507	27 31 37	3505	28 51 56	3501	30 12 19	3498
	Spica ♍ E.	63 4 15	3078	61 35 39	3081	60 7 6	3084	58 38 37	3086
	Antares E.	108 56 59	3070	107 28 13	3073	105 59 31	3076	104 30 52	3078
17	Sun W.	36 54 49	3489	38 15 25	3487	39 36 4	3485	40 56 45	3483
	Spica ♍ E.	51 16 47	3095	49 48 31	3096	48 20 16	3096	46 52 2	3097
	Antares E.	97 8 5	3084	95 39 36	3084	94 11 7	3084	92 42 38	3083
18	Sun W.	47 40 48	3470	49 1 46	3466	50 22 48	3462	51 43 55	3458
	Regulus W.	15 24 30	3240	16 49 52	3212	18 15 47	3189	19 42 9	3170
	Spica ♍ E.	39 30 56	3096	38 2 42	3096	36 34 27	3094	35 6 10	3093
	Antares E.	85 20 1	3078	83 51 24	3076	82 22 45	3073	80 54 2	3070
19	Sun W.	58 30 44	3432	59 52 24	3426	61 14 11	3419	62 36 6	3411
	Regulus W.	26 58 48	3104	28 26 53	3094	29 55 10	3083	31 23 40	3073
	Spica ♍ E.	27 44 26	3087	26 16 0	3087	24 47 34	3087	23 19 8	3086
	Antares E.	73 29 26	3050	72 0 15	3045	70 30 58	3039	69 1 33	3033
20	Sun W.	69 27 50	3371	70 50 40	3361	72 13 41	3351	73 36 53	3340
	Venus W.	23 57 39	3421	25 19 32	3406	26 41 42	3391	28 4 9	3375
	Antares E.	61 32 29	2997	60 2 12	2988	58 31 44	2980	57 1 6	2970
	α Aquilæ E.	108 37 3	3930	107 24 14	3907	106 11 1	3884	104 57 25	3861
21	Sun W.	80 36 7	3282	82 0 39	3269	83 25 27	3255	84 50 31	3241
	Venus W.	35 0 39	3302	36 24 48	3287	37 49 15	3271	39 14 1	3256
	Antares E.	49 24 47	2918	47 52 51	2905	46 20 39	2894	44 48 13	2881
	α Aquilæ E.	98 43 57	3762	97 28 15	3744	96 12 14	3727	94 55 55	3710
22	Sun W.	92 0 4	3167	93 26 53	3150	94 54 2	3134	96 21 30	3117
	Venus W.	46 22 29	3173	47 49 10	3156	49 16 12	3138	50 43 35	3120
	Spica ♍ W.	9 38 13	3079	11 6 48	2997	12 37 4	2936	14 8 37	2889
	Antares E.	37 1 51	2815	35 27 42	2801	33 53 15	2785	32 18 28	2771
	α Aquilæ E.	88 30 8	3636	87 12 13	3623	85 54 4	3611	84 35 42	3600
	Jupiter E.	120 6 13	2785	118 31 26	2770	116 56 19	2754	115 20 51	2738
23	Sun W.	103 44 7	3028	105 13 45	3010	106 43 45	2992	10[illegible]	
	Venus W.	58 6 6	3027	59 35 45	3007	61 5 49	298[illegible]		
	Spica ♍ W.	21 58 48	2733	23 34 44	2709	25 11 12	26[illegible]		
	Antares E.	24 19 40	2696	22 42 55	2681	21 5 50	26[illegible]		

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
8	Mars E.	37 56 5	2896	36 23 41	2909	34 51 34	2921	33 19 42	2934
	Sun E.	59 43 18	2995	58 12 59	3008	56 42 56	3020	55 13 8	3032
9	Fomalhaut W.	88 16 25	2907	89 48 35	2916	91 20 33	2927	92 52 18	2936
	Jupiter W.	87 17 33	2716	88 53 52	2726	90 29 58	2735	92 5 51	2744
	α Pegasi W.	68 37 37	3152	70 4 44	3152	71 31 51	3153	72 58 56	3156
	Saturn E.	23 55 41	2862	22 22 33	2885	20 49 55	2912	19 17 51	2942
	Mars E.	25 44 28	3002	24 14 17	3016	22 44 24	3031	21 14 50	3048
	Sun E.	47 47 50	3092	46 19 30	3104	44 51 25	3115	43 23 33	3127
10	Fomalhaut W.	100 27 55	2988	101 58 23	2998	103 28 38	3010	104 58 38	3021
	Jupiter W.	100 2 20	2788	101 37 4	2797	103 11 36	2805	104 45 57	2814
	α Pegasi W.	80 13 22	3176	81 40 0	3182	83 6 31	3188	84 32 54	3194
	α Arietis W.	36 52 34	2997	38 22 51	2993	39 53 13	2989	41 23 39	2986
	Sun E.	36 7 54	3188	34 41 30	3200	33 15 21	3214	31 49 28	3227
16	Sun W.	31 32 44	3497	32 53 12	3495	34 13 42	3493	35 34 14	3490
	Spica ♍ E.	57 10 10	3088	55 41 46	3090	54 13 24	3092	52 45 5	3093
	Antares E.	103 2 15	3079	101 33 40	3081	100 5 7	3082	98 36 35	3083
17	Sun W.	42 17 28	3481	43 38 13	3478	44 59 2	3476	46 19 53	3472
	Spica ♍ E.	45 23 49	3097	43 55 36	3097	42 27 23	3097	40 59 10	3096
	Antares E.	91 14 8	3084	89 45 39	3083	88 17 8	3081	86 48 35	3080
18	Sun W.	53 5 6	3454	54 26 22	3448	55 47 44	3444	57 9 11	3439
	Regulus W.	21 8 54	3154	22 35 58	3139	24 3 20	3127	25 30 57	3115
	Spica ♍ E.	33 37 52	3092	32 9 33	3091	30 41 12	3090	29 12 50	3088
	Antares E.	79 25 16	3067	77 56 26	3063	76 27 31	3059	74 58 31	3055
19	Sun W.	63 58 9	3405	65 20 20	3397	66 42 40	3388	68 5 10	3379
	Regulus W.	32 52 22	3063	34 21 17	3054	35 50 23	3043	37 19 42	3034
	Spica ♍ E.	21 50 41	3088	20 22 17	3091	18 53 56	3096	17 25 41	3104
	Antares E.	67 32 1	3026	66 2 21	3020	64 32 33	3013	63 2 36	3005
20	Sun W.	75 0 18	3330	76 23 55	3319	77 47 45	3307	79 11 49	3294
	Venus W.	29 26 54	3361	30 49 55	3347	32 13 12	3332	33 36 47	3317
	Antares E.	55 30 15	2961	53 59 13	2950	52 27 58	2939	50 56 29	2929
	α Aquilæ E.	103 43 26	3840	102 29 5	3819	101 14 23	3799	99 59 20	3780
21	Sun W.	86 15 51	3227	87 41 28	3213	89 7 22	3198	90 33 34	3183
	Venus W.	40 39 4	3240	42 4 26	3224	43 30 7	3207	44 56 8	3190
	Antares E.	43 15 30	2869	41 42 31	2856	40 9 15	2842	38 35 42	2828
	α Aquilæ E.	93 39 18	3694	92 22 25	3678	91 5 15	3663	89 47 49	3649
22	Sun W.	97 49 19	3100	99 17 29	3083	100 46 0	3065	102 14 52	3047
	Venus W.	52 11 20	3102	53 39 27	3083	55 7 57	3065	56 36 49	3045
	Spica ♍ W.	15 41 10	2850	17 14 33	2816	18 48 40	2786	20 23 26	2759
	Antares E.	30 43 22	2756	29 7 57	2741	27 32 11	2726	25 56 6	2711
	α Aquilæ E.	83 17 8	3589	81 58 22	3580	80 39 26	3572	79 20 21	3564
	Jupiter E.	113 45 2	2722	112 8 52	2705	110 32 19	2689	108 55 24	2672
23	Sun W.	109 44 55	2953	111 16 7	2935	112 47 42	2915	114 19 42	2895
	W.	64 7 11	2947	65 38 30	2927	67 10 14	2907	68 42 24	2887
	W.	28 25 41	2641	30 3 40	2620	31 42 8	2599	33 21 5	2578
		17 50 45	2641	16 12 46	2631	14 34 33	2624	12 56 11	2621

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	α Aquilæ E.	78 1 7	3557	76 41 46	3552	75 22 19	3548	74 2 48	3545
	Fomalhaut E.	106 40 40	2874	105 7 48	2854	103 34 30	2833	102 0 45	2814
	Jupiter E.	107 18 7	2654	105 40 26	2637	104 2 21	2620	102 23 53	2605
24	Sun W.	115 52 7	2876	117 24 56	2856	118 58 11	2837	120 31 51	2818
	Venus W.	70 15 0	2866	71 48 3	2845	73 21 32	2824	74 55 28	2804
	Spica ♍ W.	35 0 30	2556	36 40 25	2537	38 20 47	2516	40 1 38	2497
	α Aquilæ E.	67 24 57	3556	66 5 35	3564	64 46 21	3575	63 27 20	3588
	Jupiter E.	94 5 17	2510	92 24 17	2491	90 42 51	2472	89 0 59	2453
	Fomalhaut E.	94 5 33	2715	92 29 13	2696	90 52 27	2677	89 15 17	2658
25	Sun W.	128 26 31	2722	130 2 42	2702	131 39 19	2684	133 16 20	2667
	Venus W.	82 51 53	2701	84 28 32	2681	86 5 37	2661	87 43 10	2641
	Spica ♍ W.	48 32 57	2397	50 16 36	2377	52 0 44	2358	53 45 19	2340
	α Aquilæ E.	56 57 10	3712	55 40 36	3750	54 24 42	3794	53 9 34	3846
	Jupiter E.	80 24 58	2360	78 40 26	2341	76 55 27	2323	75 10 1	2304
	Fomalhaut E.	81 3 12	2569	79 23 35	2553	77 43 36	2538	76 3 15	2522
	α Pegasi E.	101 18 8	2758	99 42 45	2736	98 6 53	2714	96 30 32	2693
26	Venus W.	95 57 32	2546	97 37 42	2527	99 18 18	2509	100 59 18	2491
	Spica ♍ W.	62 34 58	2249	64 22 12	2232	66 9 52	2215	67 57 57	2198
	Antares W.	16 42 40	2272	18 29 21	2249	20 16 35	2229	22 4 19	2209
	Jupiter E.	66 16 19	2219	64 28 19	2202	62 39 54	2185	60 51 4	2170
	Fomalhaut E.	67 36 28	2456	65 54 13	2446	64 11 44	2436	62 29 1	2428
	α Pegasi E.	88 22 9	2602	86 43 16	2586	85 4 2	2572	83 24 29	2558
27	Spica ♍ W.	77 4 14	2125	78 54 35	2111	80 45 17	2099	82 36 18	2087
	Antares W.	31 9 48	2127	33 0 6	2113	34 50 46	2099	36 41 47	2087
	Jupiter E.	51 41 18	2100	49 50 18	2087	47 58 58	2075	46 7 21	2064
	Fomalhaut E.	53 53 10	2410	52 9 49	2411	50 26 30	2416	48 43 18	2423
	α Pegasi E.	75 2 35	2510	73 21 35	2504	71 40 28	2500	69 59 15	2498
28	Spica ♍ W.	91 55 42	2036	93 48 20	2028	95 41 10	2021	97 34 12	2014
	Antares W.	46 1 21	2034	47 54 3	2026	49 46 57	2017	51 40 4	2010
	Jupiter E.	36 45 23	2021	34 52 22	2015	32 59 12	2010	31 5 54	2006
	Fomalhaut E.	40 11 26	2514	38 30 33	2548	36 50 27	2590	35 11 19	2640
	α Pegasi E.	61 33 16	2517	59 52 26	2528	58 11 51	2542	56 31 36	2558
	α Arietis E.	102 20 32	2100	100 29 33	2091	98 38 20	2083	96 46 55	2076
29	Antares W.	61 7 55	1988	63 1 48	1986	64 55 44	1984	66 49 43	1984
	α Pegasi E.	48 17 49	2703	46 41 13	2748	45 5 37	2799	43 31 8	2858
	α Arietis E.	87 27 30	2054	85 35 20	2052	83 43 6	2051	81 50 52	2051
30	Antares W.	76 19 26	1993	78 13 12	1996	80 6 52	2001	82 0 24	2007
	α Aquilæ W.	41 30 54	4656	42 32 31	4465	43 36 54	4295	44 43 51	4146
	α Arietis E.	72 30 10	2066	70 38 18	2072	68 46 36	2078	66 55 3	2086
	Aldebaran E.	102 48 44	2033	100 56 1	2037	99 3 24	2041	97 10 53	2046
31	Antares W.	91 25 37	2044	93 18 3	2053	95 10 14	2063	97 2 10	2074
	α Aquilæ W.	50 49 42	3626	52 7 [illegible]		53 27 [illegible]		54 47 44	3438
	α Arietis E.	57 40 50	2140	55 50 [illegible]				[illegible]	2184
	Aldebaran E.	87 50 43	2083	85 59 [illegible]					
	Saturn E.	105 56 49	2090	104 [illegible]					
	Mars E.	119 55 40	2249	118 [illegible]					

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	α Aquilæ E.	72 43 13	3544	71 23 37	3544	70 4 1	3545	68 44 27	3549
	Fomalhaut E.	100 26 35	2793	98 51 58	2774	97 16 56	2753	95 41 27	2734
	Jupiter E.	100 45 0	2583	99 5 42	2565	97 25 59	2547	95 45 51	2528
24	Sun W.	122 5 56	2798	123 40 27	2778	125 15 23	2759	126 50 44	2740
	Venus W.	76 29 51	2784	78 4 40	2763	79 39 57	2741	81 15 42	2722
	Spica ♍ W.	41 42 58	2475	43 24 46	2456	45 7 1	2436	46 49 45	2416
	α Aquilæ E.	62 8 33	3606	60 50 5	3626	59 31 59	3650	58 14 19	3679
	Jupiter E.	87 18 40	2435	85 35 55	2416	83 52 43	2397	82 9 4	2378
	Fomalhaut E.	87 37 40	2640	85 59 40	2621	84 21 14	2604	82 42 25	2587
25	Sun W.	134 53 44	2649	136 31 33	2632	138 9 45	2615	139 48 19	2599
	Venus W.	89 21 9	2621	90 59 36	2602	92 38 28	2583	94 17 47	2564
	Spica ♍ W.	55 30 21	2321	57 15 50	2302	59 1 46	2284	60 48 9	2266
	α Aquilæ E.	51 55 19	3904	50 42 3	3971	49 29 55	4046	48 19 1	4133
	Jupiter E.	73 24 8	2287	71 37 50	2269	69 51 5	2252	68 3 55	2235
	Fomalhaut E.	74 22 33	2507	72 41 30	2493	71 0 7	2480	69 18 26	2468
	α Pegasi E.	94 53 43	2673	93 16 27	2654	91 38 46	2635	90 0 39	2618
26	Venus W.	102 40 42	2476	104 22 29	2459	106 4 40	2444	107 47 12	2429
	Spica ♍ W.	69 46 26	2183	71 35 19	2168	73 24 35	2153	75 14 13	2138
	Antares W.	23 52 33	2191	25 41 14	2174	27 30 21	2157	29 19 53	2142
	Jupiter E.	59 1 52	2155	57 12 16	2140	55 22 18	2126	53 31 58	2113
	Fomalhaut E.	60 46 6	2421	59 3 1	2416	57 19 49	2412	55 36 31	2410
	α Pegasi E.	81 44 36	2546	80 4 27	2535	78 24 3	2525	76 43 25	2517
27	Spica ♍ W.	84 27 37	2075	86 19 15	2065	88 11 8	2054	90 3 18	2045
	Antares W.	38 33 7	2075	40 24 45	2063	42 16 41	2053	44 8 53	2043
	Jupiter E.	44 15 27	2054	42 23 17	2044	40 30 52	2035	38 38 13	2028
	Fomalhaut E.	47 0 16	2433	45 17 28	2447	43 35 0	2465	41 52 57	2487
	α Pegasi E.	68 17 59	2497	66 36 42	2499	64 55 27	2502	63 14 17	2509
28	Spica ♍ W.	99 27 24	2008	101 20 45	2004	103 14 13	1999	105 7 49	1996
	Antares W.	53 33 22	2005	55 26 49	2000	57 20 24	1995	59 14 6	1991
	Jupiter E.	29 12 32	2006	27 19 7	2005	25 25 41	2007	23 32 18	2011
	Fomalhaut E.	33 33 19	2701	31 56 41	2775	30 21 41	2865	28 48 37	2974
	α Pegasi E.	54 51 44	2578	53 12 19	2603	51 33 28	2632	49 55 16	2665
	α Arietis E.	94 55 19	2070	93 3 33	2064	91 11 38	2060	89 19 37	2056
29	Antares W.	68 43 42	1984	70 37 41	1985	72 31 39	1987	74 25 34	1989
	α Pegasi E.	41 57 55	2926	40 26 9	3004	38 56 1	3095	37 27 45	3198
	α Arietis E.	79 58 37	2052	78 6 24	2054	76 14 14	2057	74 22 9	2061
30	Antares W.	83 53 48	2013	85 47 2	2019	87 40 6	2027	89 32 58	2035
	α Aquilæ W.	45 53 8	4015	47 4 33	3899	48 17 54	3796	49 33 0	3705
	α Arietis E.	65 3 43	2095	63 12 36	2105	61 21 44	2115	59 31 8	2127
	Aldebaran E.	95 18 30	2052	93 26 17	2059	91 34 14	2066	89 42 22	2074
31	Antares W.	98 53 49	2085	100 45 11	2096	102 36 16	2109	104 27 2	2121
	α Aquilæ W.	56 9 18	3390	57 31 46	3348	58 55 2	3312	60 19 0	3281
	α Arietis E.	50 23 9	2202	48 34 44	2221	46 46 47	2241	44 59 20	2262
	Aldebaran E.	80 26 35	2125	78 36 14	2138	76 46 12	2150	74 56 29	2164
	Saturn E.	98 33 16	2130	96 43 2	2141	94 53 6	2153	93 3 28	2166
	SUN	112 48 11	2291	111 1 58	2303	109 16 3	2315	107 30 25	2328

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 13h 30m, Mean Time.

Day of the Month.	West.	East.
1	·4 ·3	○ 2· 1.
2	·4 2· ·3 ·1	○
3	·4	○ 1· ·3 ●
4	·1	○ ·4 2. ·3
5	1·○ 2·	○ ·4 3·
6	·2	○ 3· ·1 ·4
7	3· 1·	○ ·2 ·4
8	·3	○ 2· 1. 4.
9	·3 ·1	○ 4·
10	·2●	○ ·3 1· 4·
11	·1	○ 2. 4· ·3
12	2·	○ 1·4· 3·
13	·4 ·2	○ ·1 3·
14	4· 3· 1·	○ ·2
15	4· ·3	○ ·1 2·
16	4· ·3 2· ·1	○
17	·4 ·2	○ ·3 1·
18	·4 ·1	○ 2. ·3
19	·4	○ 1· 3· ○
20	·2 ·4	○ 3· ●
21	3· 1·	○ ·2 ·4
22	3·	○ ·1 2· ·4
23	·3 2·1·	○ ·4
24	·3● ·2	○ 1. ·4
25	·1	○ ·2 ·3 4·
26		○ 2· 1· 3. 4·
27	·2 ·1	○ 3· 4·
28	1·○ 3·	○ ·2 4·
29	3·	○ ·1 2· ○
30	·3 4· 2·1·	○
31	4· ·2 ·3	○ 1.

This Table represents, at 13h 30m after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. ○ circle (○) at the left or right hand of the page, denotes that the Satellite placed by the *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding 0d·418488. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	+0·4905	−1·3041	+9·4608	−0·8175	17 21 15·06	100	181	·496
2	0·5315	1·3028	9·4664	0·8183	17 17 19·15	101	182	·498
3	0·5690	1·3014	9·4719	0·8191	17 13 23·24	102	183	·501
4	+0·6033	−1·2999	+9·4774	−0·8199	17 9 27·32	103	184	·504
5	0·6350	1·2982	9·4827	0·8208	17 5 31·41	104	185	·507
6	0·6644	1·2965	9·4880	0·8217	17 1 35·50	105	186	·509
7	+0·6919	−1·2945	+9·4932	−0·8226	16 57 39·59	106	187	·512
8	0·7176	1·2925	9·4983	0·8236	16 53 43·67	107	188	·515
9	0·7417	1·2904	9·5033	0·8246	16 49 47·76	108	189	·517
10	+0·7646	−1·2881	+9·5083	−0·8256	16 45 51·85	109	190	·520
11	0·7861	1·2856	9·5132	0·8266	16 41 55·94	110	191	·523
12	0·8065	1·2831	9·5180	0·8277	16 38 0·02	111	192	·526
13	+0·8259	−1·2804	+9·5227	−0·8288	16 34 4·11	112	193	·528
14	0·8443	1·2775	9·5274	0·8299	16 30 8·20	113	194	·531
15	0·8619	1·2745	9·5320	0·8311	16 26 12·29	114	195	·534
16	+0·8787	−1·2714	+9·5365	−0·8323	16 22 16·38	115	196	·537
17	0·8947	1·2682	9·5409	0·8335	16 18 20·46	116	197	·539
18	0·9101	1·2648	9·5453	0·8347	16 14 24·55	117	198	·542
19	+0·9248	−1·2612	+9·5496	−0·8359	16 10 28·64	118	199	·545
20	0·9389	1·2575	9·5538	0·8372	16 6 32·73	119	200	·548
21	0·9524	1·2536	9·5580	0·8385	16 2 36·82	120	201	·550
22	+0·9655	−1·2496	+9·5621	−0·8398	15 58 40·90	121	202	·553
23	0·9780	1·2454	9·5661	0·8411	15 54 44·99	122	203	·556
24	0·9901	1·2411	9·5700	0·8424	15 50 49·08	123	204	·559
25	+1·0017	−1·2366	+9·5740	−0·8438	15 46 53·17	124	205	·561
26	1·0129	1·2319	9·5778	0·8451	15 42 57·26	125	206	·564
27	1·0237	1·2270	9·5816	0·8465	15 39 1·35	126	207	·567
28	+1·0341	−1·2220	+9·5853	−0·8478	15 35 5·44	127	208	·569
29	1·0442	1·2168	9·5889	0·8492	15 31 9·53	128	209	·572
30	1·0539	1·2114	9·5925	0·8506	15 27 13·62	129	210	·575
31	1·0633	1·2058	9·5960	0·8520	15 23 17·70	130	211	·578
	·0724	−1·2000	+9·5995	−0·8534	15 19 21·79	131	212	·580

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be added to* / *subt. from Apparent Time.*	Diff. for 1 h
		h m s	s	° ′ ″	″	m s	m s	s
Wed.	1	8 44 11·63	9·704	N.18 7 22·1	37·88	1 6·67	6 3·45	0·1
Thur.	2	8 48 4·54	9·680	17 52 12·9	38·62	1 6·58	5 59·82	0·
Frid.	3	8 51 56·88	9·656	17 36 46·0	39·34	1 6·50	5 55·61	0·
Sat.	4	8 55 48·63	9·632	17 21 1·9	40·05	1 6·41	5 50·82	0·
Sun.	5	8 59 39·79	9·608	17 5 0·9	40·74	1 6·32	5 45·44	0·
Mon.	6	9 3 30·38	9·584	16 48 43·2	41·42	1 6·24	5 39·49	0·
Tues.	7	9 7 20·39	9·560	16 32 9·0	42·09	1 6·15	5 32·95	0·
Wed.	8	9 11 9·82	9·536	16 15 18·8	42·75	1 6·07	5 25·85	0·
Thur.	9	9 14 58·69	9·512	15 58 12·7	43·40	1 5·98	5 18·19	0·
Frid.	10	9 18 46·99	9·489	15 40 51·1	44·03	1 5·90	5 9·95	0·
Sat.	11	9 22 34·72	9·465	15 23 14·3	44·65	1 5·81	5 1·16	0·
Sun.	12	9 26 21·89	9·442	15 5 22·7	45·26	1 5·73	4 51·79	0·
Mon.	13	9 30 8·50	9·419	14 47 16·5	45·85	1 5·65	4 41·87	0·
Tues.	14	9 33 54·56	9·396	14 28 56·2	46·43	1 5·57	4 31·40	0·
Wed.	15	9 37 40·06	9·373	14 10 22·0	46·99	1 5·49	4 20·38	0·
Thur.	16	9 41 25·02	9·351	13 51 34·3	47·54	1 5·42	4 8·81	0·
Frid.	17	9 45 9·44	9·329	13 32 33·4	48·08	1 5·34	3 56·70	0·
Sat.	18	9 48 53·33	9·308	13 13 19·6	48·60	1 5·27	3 44·08	0·
Sun.	19	9 52 36·70	9·286	12 53 53·3	49·10	1 5·20	3 30·94	0·
Mon.	20	9 56 19·56	9·265	12 34 14·8	49·60	1 5·12	3 17·28	0·
Tues.	21	10 0 1·92	9·245	12 14 24·6	50·08	1 5·05	3 3·12	0·
Wed.	22	10 3 43·80	9·225	11 54 22·7	50·55	1 4·99	2 48·48	0·
Thur.	23	10 7 25·20	9·206	11 34 9·7	51·00	1 4·92	2 33·37	0·
Frid.	24	10 11 6·15	9·188	11 13 45·7	51·44	1 4·86	2 17·81	0·
Sat.	25	10 14 46·66	9·171	10 53 11·2	51·87	1 4·80	2 1·82	0·
Sun.	26	10 18 26·76	9·154	10 32 26·3	52·29	1 4·74	1 45·40	0·
Mon.	27	10 22 6·45	9·138	10 11 31·5	52·69	1 4·68	1 28·57	0·
Tues.	28	10 25 45·76	9·123	9 50 27·0	53·08	1 4·62	1 11·37	0·
Wed.	29	10 29 24·70	9·108	9 29 13·1	53·46	1 4·57	0 53·82	0·
Thur.	30	10 33 3·30	9·095	9 7 50·1	53·83	1 4·52	0 35·91	0·
Frid.	31	10 36 41·57	9·082	8 46 18·3	54·18	1 4·47	0 17·68	0·
Sat.	32	10 40 19·54		N. 8 24 38·0		1 4·42	0 0·86	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ˢ·18 from the

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	Semidiam.*	Dquation of Time, *to be subt. from* / *added to Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Wed.	1	8 44 10·64	N. 18 7 26·0	15 47·9	6 3·46	8 38 7·18
Thur.	2	8 48 3·57	17 52 16·7	15 48·0	5 59·83	8 42 3·74
Frid.	3	8 51 55·92	17 36 49·9	15 48·1	5 55·63	8 46 0·29
Sat.	4	8 55 47·69	17 21 5·8	15 48·2	5 50·84	8 49 56·85
Sun.	5	8 59 38·87	17 5 4·8	15 48·4	5 45·46	8 53 53·41
Mon.	6	9 3 29·47	16 48 47·1	15 48·5	5 39·51	8 57 49·96
Tues.	7	9 7 19·50	16 32 13·0	15 48·7	5 32·98	9 1 46·52
Wed.	8	9 11 8·96	16 15 22·7	15 48·8	5 25·88	9 5 43·07
Thur.	9	9 14 57·85	15 58 16·6	15 49·0	5 18·22	9 9 39·63
Frid.	10	9 18 46·17	15 40 54·9	15 49·1	5 9·98	9 13 36·19
Sat.	11	9 22 33·93	15 23 18·1	15 49·3	5 1·19	9 17 32·74
Sun.	12	9 26 21·12	15 5 26·4	15 49·4	4 51·82	9 21 29·30
Mon.	13	9 30 7·76	14 47 20·2	15 49·6	4 41·91	9 25 25·85
Tues.	14	9 33 53·85	14 28 59·8	15 49·8	4 31·44	9 29 22·41
Wed.	15	9 37 39·38	14 10 25·4	15 50·0	4 20·42	9 33 18·96
Thur.	16	9 41 24·37	13 51 37·6	15 50·2	4 8·85	9 37 15·52
Frid.	17	9 45 8·82	13 32 36·6	15 50·4	3 56·74	9 41 12·08
Sat.	18	9 48 52 75	13 13 22·7	15 50·6	3 44·12	9 45 8·63
Sun.	19	9 52 36·16	12 53 56·2	15 50·8	3 30·97	9 49 5·19
Mon.	20	9 56 19·06	12 34 17·6	15 51·0	3 17·31	9 53 1·74
Tues.	21	10 0 1·45	12 14 27·1	15 51·2	3 3·15	9 56 58·30
Wed.	22	10 3 43·36	11 54 25·1	15 51·4	2 48·51	10 0 54·85
Thur.	23	10 7 24·81	11 34 11·8	15 51·6	2 33·40	10 4 51·41
Frid.	24	10 11 5·80	11 13 47·7	15 51·8	2 17·84	10 8 47·96
Sat.	25	10 14 46·36	10 53 12·9	15 52·0	2 1·84	10 12 44·52
Sun.	26	10 18 26·49	10 32 27·9	15 52·2	1 45·42	10 16 41·07
Mon.	27	10 22 6·22	10 11 32·8	15 52·4	1 28·59	10 20 37·63
Tues.	28	10 25 45·57	9 50 28·1	15 52·6	1 11·39	10 24 34·18
Wed.	29	10 29 24·56	9 29 13·9	15 52·9	0 53·83	10 28 30·73
Thur.	30	10 33 3·21	9 7 50·6	15 53·1	0 35·92	10 32 27·29
Frid.	31	10 36 41·53	8 46 18·6	15 53·3	0 17·69	10 36 23·84
Sat.	32	10 40 19·54	N. 8 24 38·0	15 53·5	0 0·86	10 40 20·40

* *Apparent* Noon may be assumed the same as that for *Mean* Noon.

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parall *Noon.*	THE MOON'S Horizontal Parall *Midn*
	° ′ ″	″		′ ″	′ ″	′ ″	′
1	128 36 48·7	S. 0·16	0·0063359	16 29·3	16 23·5	60 23·3	60
2	129 34 13·9	S. 0·06	0·0062788	16 17·2	16 10·4	59 39·1	59 14
3	130 31 40·3	N. 0·07	0·0062204	16 3·4	15 56·3	58 48·6	58 22
4	131 29 8·0	0·20	0·0061604	15 49·2	15 42·3	57 56·7	57 31
5	132 26 37·0	0·33	0·0060987	15 35·6	15 29·3	57 6·8	56 43
6	133 24 7·2	0·46	0·0060353	15 23·3	15 17·7	56 21·6	56 1
7	134 21 38·7	0·59	0·0059701	15 12·6	15 8·0	55 42·6	55 25
8	135 19 11·7	0·70	0·0059029	15 3·8	15 0·0	55 10·1	54 56
9	136 16 46·1	0·79	0·0058336	14 56·7	14 53·8	54 44·3	54 33
10	137 14 21·8	0·85	0·0057622	14 51·2	14 49·0	54 24·2	54 16
11	138 11 58·8	0·88	0·0056886	14 47·3	14 45·9	54 9·7	54 4
12	139 9 37·2	0·89	0·0056128	14 44·9	14 44·2	54 0·9	53 58
13	140 7 16·8	0·86	0·0055349	14 43·9	14 43·9	53 57·3	53 57
14	141 4 57·6	0·80	0·0054548	14 44·4	14 45·2	53 59·2	54
15	142 2 39·6	0·71	0·0053723	14 46·5	14 48·2	54 6·9	54 1
16	143 0 22·7	0·60	0·0052878	14 50·4	14 53·0	54 21·0	54 3
17	143 58 7·0	0·48	0·0052013	14 56·1	14 59·7	54 42·0	54 5
18	144 55 52·4	0·36	0·0051130	15 3·8	15 8·5	55 10·3	55 2
19	145 53 39·0	0·23	0·0050230	15 13·8	15 19·5	55 46·8	56
20	146 51 26·7	N. 0·10	0·0049314	15 25·8	15 32·5	56 30·8	56 5
21	147 49 15·4	S. 0·02	0·0048384	15 39·6	15 47·1	57 21·5	57 4
22	148 47 5·3	0·12	0·0047441	15 54·7	16 2·4	58 16·8	58 4
23	149 44 56·4	0·19	0·0046487	16 10·0	16 17·4	59 12·9	59 3
24	150 42 48·8	0·24	0·0045522	16 24·3	16 30·5	60 5·0	60 2
25	151 40 42·5	0·26	0·0044548	16 35·9	16 40·3	60 47·5	61
26	152 38 37·7	0·24	0·0043566	16 43·5	16 45·5	61 15·6	61 2
27	153 36 34·3	0·20	0·0042578	16 46·1	16 45·4	61 25·2	61 2
28	154 34 32·5	0·13	0·0041584	16 43·3	16 40·0	61 14·8	61
29	155 32 32·4	S. 0·03	0·0040582	16 35·5	16 30·0	60 46·1	60 2
30	156 30 34·0	N. 0·08	0·0039573	16 23·7	16 16·6	60 2·8	59 3
31	157 28 37·4	0·21	0·0038557	16 9·1	16 1·3	59 9·4	58 4
32	158 26 42·6	N. 0·34	0·0037533	15 53·4	15 45·		

MEAN TIME

Day of the Week.	Day of the Month.	THE MOON'S Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
ed.	1	354 24 37·2	1 43 1·8	S. 3 28 28·5	S. 2 59 5·8	18·3	15 38·2
ur.	2	8 55 14·9	16 0 58·8	2 27 13·7	1 53 30·1	19·3	16 26·5
id.	3	23 0 7·5	29 52 45·0	1 18 33·0	S. 0 42 57·7	20·3	17 14·4
t.	4	36 39 3·4	43 19 21·0	S. 0 7 17·6	N. 0 27 57·2	21·3	18 2 9
n.	5	49 54 0·6	56 23 28·3	N. 1 2 19·7	1 35 25·6	22·3	18 52·9
on.	6	62 48 11·7	69 8 38·4	2 6 53·4	2 36 24·1	23·3	19 44·5
es.	7	75 25 16·2	81 38 31·4	3 3 41·3	3 28 30·2	24·3	20 37·3
ed.	8	87 48 48·8	93 56 30·7	3 50 38·6	4 9 56·0	25·3	21 30·2
ur.	9	100 1 57·7	106 5 27·6	4 26 13·3	4 39 23·7	26·3	22 22·1
id.	10	112 7 16·3	118 7 37·7	4 49 21·6	4 56 3·7	27·3	23 11·8
t.	11	124 6 44·2	130 4 46·4	4 59 27·6	4 59 33·2	28·3	23 58·7
n.	12	136 1 55·0	141 58 19·4	4 56 22·4	4 49 58·0	29·3	☌
on.	13	147 54 10·2	153 49 38·3	4 40 24·8	4 27 48·9	0·7	0 42·9
es.	14	159 44 55·5	165 40 15·5	4 12 18·8	3 54 3·3	1·7	1 24·6
ed.	15	171 35 54·3	177 32 9·6	3 33 12·7	3 9 58·8	2·7	2 4·8
ur.	16	183 29 22·1	189 27 55·0	2 44 34·8	2 17 13·9	3·7	2 44·3
id.	17	195 28 14·1	201 30 47·7	1 48 11·1	1 17 42·0	4·7	3 24·1
t.	18	207 36 6·9	213 44 44·2	N. 0 46 3·9	N. 0 13 34·8	5·7	4 5·5
n.	19	219 57 14·1	226 14 11·7	S. 0 19 25·8	S. 0 52 37·0	6·7	4 49·5
on.	20	232 36 12·3	239 3 49·9	1 25 36·3	1 57 59·1	7·7	5 37·5
es.	21	245 37 36·5	252 18 0·0	2 29 19·4	2 59 8·8	8·7	6 30·3
ed.	22	259 5 23·2	266 0 1·6	3 26 57·7	3 52 14·8	9·7	7 28·2
ur.	23	273 2 1·4	280 11 17·9	4 14 28·5	4 33 7·0	10·7	8 30·2
id.	24	287 27 34·2	294 50 19·4	4 47 40·1	4 57 40·7	11·7	9 34·1
t.	25	302 18 49·2	309 52 5·2	5 2 45·9	5 2 39·1	12·7	10 37·0
n.	26	317 28 57·7	325 8 7·1	4 57 11·9	4 46 24·1	13·7	11 36·8
on.	27	332 48 8·0	340 27 33·3	4 30 25·6	4 9 35·9	14·7	12 32·9
es.	28	348 4 58·1	355 39 3·2	3 44 22·4	3 15 20·1	15·7	13 25·6
ed.	29	3 8 39·3	10 32 48·4	2 43 9·3	2 8 32·8	16·7	14 16·2
ur.	30	17 50 45·9	25 2 1·2	1 32 15·0	S. 0 54 59·0	17·7	15 5·9
id.	31	32 6 15·6	39 3 23·2	S. 0 17 25·3	N. 0 19 48·3	18·7	15 55·8
	12	45 53 28·3	52 36 43·9	N. 0 56 8·7	N. 1 31 6·6	19·7	16 46·8

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 1m.	Hour.	Right Ascension.	Declination.
	WEDNESDAY 1.				*FRIDAY* 3.	
	h m s	° ′ ″	″		h m s	° ′ ″
0	23 45 0·72	S. 5 24 40·1	167·52	0	1 27 4·15	N. 7 44 1·3
1	23 47 12·19	5 7 55·0	167·63	1	1 29 9·69	7 59 32·6
2	23 49 23·42	4 51 9·2	167·72	2	1 31 15·23	8 15 0·4
3	23 51 34·40	4 34 22·9	167·80	3	1 33 20·77	8 30 24·6
4	23 53 45·15	4 17 36·1	167·87	4	1 35 26·32	8 45 45·0
5	23 55 55·66	4 0 48·9	167·90	5	1 37 31·88	9 1 1·8
6	23 58 5·95	3 44 1·5	167·93	6	1 39 37·46	9 16 14·7
7	0 0 16·02	3 27 13·9	167·93	7	1 41 43·06	9 31 23·7
8	0 2 25·87	3 10 26·3	167·93	8	1 43 48·69	9 46 28·8
9	0 4 35·51	2 53 38·7	167·90	9	1 45 54·35	10 1 29·8
10	0 6 44·95	2 36 51·3	167·87	10	1 48 0·04	10 16 26·8
11	0 8 54·19	2 20 4·1	167·80	11	1 50 5·77	10 31 19·6
12	0 11 3·24	2 3 17·3	167·72	12	1 52 11·54	10 46 8·2
13	0 13 12·10	1 46 31·0	167·63	13	1 54 17·36	11 0 52·5
14	0 15 20·78	1 29 45·2	167·53	14	1 56 23·23	11 15 32·5
15	0 17 29·28	1 13 0·0	167·40	15	1 58 29·15	11 30 8·0
16	0 19 37·61	0 56 15·6	167·25	16	2 0 35·13	11 44 39·1
17	0 21 45·77	0 39 32·1	167·10	17	2 2 41·17	11 59 5·6
18	0 23 53·76	0 22 49·5	166·93	18	2 4 47·28	12 13 27·5
19	0 26 1·60	S. 0 6 7·9	166·75	19	2 6 53·46	12 27 44·7
20	0 28 9·29	N. 0 10 32·6	166·55	20	2 8 59·70	12 41 57·2
21	0 30 16·83	0 27 11·9	166·32	21	2 11 6·03	12 56 4·9
22	0 32 24·23	0 43 49·8	166·10	22	2 13 12·44	13 10 7·8
23	0 34 31·50	N. 1 0 26·4	165·85	23	2 15 18·92	N.13 24 5·7
	THURSDAY 2.				*SATURDAY* 4.	
0	0 36 38·63	N. 1 17 1·5	165·58	0	2 17 25·50	N.13 37 58·7
1	0 38 45·63	1 33 35·0	165·32	1	2 19 32·17	13 51 46·6
2	0 40 52·52	1 50 6·9	165·02	2	2 21 38·93	14 5 29·5
3	0 42 59·29	2 6 37·0	164·72	3	2 23 45·78	14 19 7·2
4	0 45 5·95	2 23 5·3	164·40	4	2 25 52·74	14 32 39·6
5	0 47 12·51	2 39 31·7	164·07	5	2 27 59·80	14 46 6·8
6	0 49 18·97	2 55 56·1	163·72	6	2 30 6·96	14 59 28·7
7	0 51 25·33	3 12 18·4	163·35	7	2 32 14·24	15 12 45·2
8	0 53 31·60	3 28 38·5	162·98	8	2 34 21·62	15 25 56·2
9	0 55 37·79	3 44 56·4	162·60	9	2 36 29·12	15 39 1·8
10	0 57 43·91	4 1 12·0	162·20	10	2 38 36·74	15 52 1·7
11	0 59 49·95	4 17 25·2	161·77	11	2 40 44·48	16 4 56·1
12	1 1 55·92	4 33 35·8	161·35	12	2 42 52·34	16 17 44·8
13	1 4 1·83	4 49 43·9	160·90	13	2 45 0·32	16 30 27·8
14	1 6 7·69	5 5 49·3	160·45	14	2 47 8·43	16 43 5·0
15	1 8 13·49	5 21 52·0	160·00	15	2 49 16·67	16 55 36·3
16	1 10 19·25	5 37 52·0	159·50	16	2 51 25·04	17 8 1·8
17	1 12 24·96	5 53 49·0	159·02	17	2 53 33·55	17 20 21·4
18	1 14 30·64	6 9 43·1	158·50	18	2 55 42·19	17 32 34·9
19	1 16 36·28	6 25 34·1	158·00	19	2 57 50·97	17 44 42·4
20	1 18 41·89	6 41 22·1	157·45	20	2 59 59·89	17 56 43·8
21	1 20 47·48	6 57 6·8	156·92	21	3 2 8·95	18 8 39·0
22	1 22 53·05	7 12 48·3	156·37	22	3 4 18·16	18 20 28·1
23	1 24 58·61	7 28 26·5	155·80	23	3 6 27·51	18 32 10·8
24	1 27 4·15	N. 7 44 1·3		24	3 8 37·01	N.18 43 47·3

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 5.		
	h m s	° ′ ″	″
0	3 8 37·01	N.18 43 47·3	115·02
1	3 10 46·66	18 55 17·4	113·95
2	3 12 56·45	19 6 41·1	112·87
3	3 15 6·40	19 17 58·3	111·80
4	3 17 16·50	19 29 9·1	110·68
5	3 19 26·75	19 40 13·2	109·60
6	3 21 37·15	19 51 10·8	108·48
7	3 23 47·71	20 2 1·7	107·37
8	3 25 58·43	20 12 45·9	106·23
9	3 28 9·31	20 23 23·3	105·10
10	3 30 20·34	20 33 53·9	103·97
11	3 32 31·53	20 44 17·7	102·82
12	3 34 42·88	20 54 34·6	101·67
13	3 36 54·39	21 4 44·6	100·48
14	3 39 6·06	21 14 47·5	99·33
15	3 41 17·89	21 24 43·5	98·13
16	3 43 29·87	21 34 32·3	96·95
17	3 45 42·02	21 44 14·0	95·77
18	3 47 54·33	21 53 48·6	94·57
19	3 50 6·79	22 3 16·0	93·35
20	3 52 19·41	22 12 36·1	92·13
21	3 54 32·19	22 21 48·9	90·90
22	3 56 45·13	22 30 54·3	89·68
23	3 58 58·22	N.22 39 52·4	88·45
	MONDAY 6.		
0	4 1 11·47	N.22 48 43·1	87·20
1	4 3 24·87	22 57 26·3	85·95
2	4 5 38·43	23 6 2·0	84·70
3	4 7 52·14	23 14 30·2	83·43
4	4 10 6·01	23 22 50·8	82·15
5	4 12 20·02	23 31 3·7	80·90
6	4 14 34·18	23 39 9·1	79·60
7	4 16 48·49	23 47 6·7	78·32
8	4 19 2·95	23 54 56·6	77·03
9	4 21 17·56	24 2 38·8	75·72
10	4 23 32·30	24 10 13·1	74·42
11	4 25 47·19	24 17 39·6	73·12
12	4 28 2·21	24 24 58·3	71·80
13	4 30 17·37	24 32 9·1	70·47
14	4 32 32·67	24 39 11·9	69·15
15	4 34 48·10	24 46 6·8	67·82
16	4 37 3·65	24 52 53·7	66·48
17	4 39 19·34	24 59 32·6	65·13
18	4 41 35·15	25 6 3·4	63·78
19	4 43 51·08	25 12 26·1	62·43
20	4 46 7·13	25 18 40·7	61·08
21	4 48 23·30	25 24 47·2	59·72
22	4 50 39·58	25 30 45·5	58·37
23	4 52 55·07	25 36 35·7	56·98
24	4 5[illegible]	[illegible] 17·6	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 7.		
	h m s	° ′ ″	″
0	4 55 12·47	N.25 42 17·6	55·62
1	4 57 29·07	25 47 51·3	54·23
2	4 59 45·78	25 53 16·7	52·85
3	5 2 2·57	25 58 33·8	51·47
4	5 4 19·46	26 3 42·6	50·08
5	5 6 36·45	26 8 43·1	48·68
6	5 8 53·52	26 13 35·2	47·28
7	5 11 10·67	26 18 18·9	45·90
8	5 13 27·90	26 22 54·3	44·50
9	5 15 45·20	26 27 21·3	43·08
10	5 18 2·57	26 31 39·8	41·68
11	5 20 20·01	26 35 49·9	40·28
12	5 22 37·52	26 39 51·6	38·87
13	5 24 55·08	26 43 44·8	37·45
14	5 27 12·70	26 47 29·5	36·03
15	5 29 30·37	26 51 5·7	34·63
16	5 31 48·08	26 54 33·5	33·20
17	5 34 5·83	26 57 52·7	31·78
18	5 36 23·62	27 1 3·4	30·35
19	5 38 41·44	27 4 5·5	28·95
20	5 40 59·29	27 6 59·2	27·50
21	5 43 17·16	27 9 44·2	26·10
22	5 45 35·04	27 12 20·8	24·67
23	5 47 52·94	N.27 14 48·8	23·23
	WEDNESDAY 8.		
0	5 50 10·85	N.27 17 8·2	21·82
1	5 52 28·76	27 19 19·1	20·38
2	5 54 46·67	27 21 21·4	18·95
3	5 57 4·57	27 23 15·1	17·53
4	5 59 22·46	27 25 0·3	16·12
5	6 1 40·34	27 26 37·0	14·68
6	6 3 58·19	27 28 5·1	13·25
7	6 6 16·02	27 29 24·6	11·83
8	6 8 33·82	27 30 35·6	10·40
9	6 10 51·58	27 31 38·0	8·98
10	6 13 9·29	27 32 31·9	7·57
11	6 15 26·97	27 33 17·3	6·13
12	6 17 44·59	27 33 54·1	4·72
13	6 20 2·16	27 34 22·4	3·30
14	6 22 19·66	27 34 42·2	1·90
15	6 24 37·10	27 34 53·6	0·47
16	6 26 54·47	27 34 56·4	0·93
17	6 29 11·76	27 34 50·8	2·33
18	6 31 28·97	27 34 36·8	3·75
19	6 33 46·09	27 34 14·3	5·15
20	6 36 3·12	27 33 43·4	6·55
21	6 38 20·06	27 33 4·1	7·95
22	6 40 36·89	27 32 16·4	9·33
23	6 42 53·62	27 31 20·4	10·73
24	6 45 10·24	N.27 30 16·0	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 9.		
	h m s	° ′ ″	″
0	6 45 10·24	N.27 30 16·0	12·12
1	6 47 26·74	27 29 3·3	13·50
2	6 49 43·12	27 27 42·3	14·87
3	6 51 59·37	27 26 13·1	16·25
4	6 54 15·50	27 24 35·6	17·63
5	6 56 31·49	27 22 49·8	18·98
6	6 58 47·34	27 20 55·9	20·35
7	7 1 3·04	27 18 53·8	21·70
8	7 3 18·60	27 16 43·6	23·07
9	7 5 34·01	27 14 25·2	24·40
10	7 7 49·26	27 11 58·8	25·77
11	7 10 4·35	27 9 24·2	27·08
12	7 12 19·27	27 6 41·7	28·43
13	7 14 34·02	27 3 51·1	29·75
14	7 16 48·60	27 0 52·6	31·07
15	7 19 3·00	26 57 46·2	32·38
16	7 21 17·22	26 54 31·9	33·70
17	7 23 31·25	26 51 9·7	35·02
18	7 25 45·09	26 47 39·6	36·30
19	7 27 58·74	26 44 1·8	37·58
20	7 30 12·19	26 40 16·3	38·88
21	7 32 25·44	26 36 23·0	40·15
22	7 34 38·48	26 32 22·1	41·43
23	7 36 51·32	N.26 28 13·5	42·70
	FRIDAY 10.		
0	7 39 3·94	N.26 23 57·3	43·95
1	7 41 16·35	26 19 33·6	45·22
2	7 43 28·54	26 15 2·3	46·45
3	7 45 40·51	26 10 23·6	47·68
4	7 47 52·25	26 5 37·5	48·92
5	7 50 3·77	26 0 44·0	50·15
6	7 52 15·05	25 55 43·1	51·35
7	7 54 26·10	25 50 35·0	52·57
8	7 56 36·92	25 45 19·6	53·78
9	7 58 47·50	25 39 56·9	54·97
10	8 0 57·84	25 34 27·1	56·15
11	8 3 7·93	25 28 50·2	57·33
12	8 5 17·78	25 23 6·2	58·50
13	8 7 27·38	25 17 15·2	59·67
14	8 9 36·73	25 11 17·2	60·83
15	8 11 45·83	25 5 12·2	61·97
16	8 13 54·68	24 59 0·4	63·12
17	8 16 3·27	24 52 41·7	64·23
18	8 18 11·60	24 46 16·3	65·37
19	8 20 19·67	24 39 44·1	66·48
20	8 22 27·48	24 33 5·2	67·58
21	8 24 35·02	24 26 19·7	68·68
22	8 26 42·30	24 19 27·6	69·77
23	8 28 49·32	24 12 29·0	70·85
24	8 30 56·07	N.24 5 23·9	

Hour.	Right Ascension.	Declination.	Diff. for
	SATURDAY 11.		
	h m s	° ′ ″	
0	8 30 56·07	N.24 5 23·9	
1	8 33 2·55	23 58 12·4	
2	8 35 8·76	23 50 54·4	
3	8 37 14·70	23 43 30·2	
4	8 39 20·37	23 35 59·7	
5	8 41 25·77	23 28 22·9	
6	8 43 30·90	23 20 40·0	
7	8 45 35·75	23 12 51·0	
8	8 47 40·33	23 4 55·9	
9	8 49 44·64	22 56 54·8	
10	8 51 48·68	22 48 47·8	
11	8 53 52·44	22 40 34·8	
12	8 55 55·92	22 32 16·0	
13	8 57 59·13	22 23 51·4	
14	9 0 2·07	22 15 21·1	
15	9 2 4·73	22 6 45·0	
16	9 4 7·12	21 58 3·4	
17	9 6 9·24	21 49 16·2	
18	9 8 11·08	21 40 23·4	
19	9 10 12·65	21 31 25·1	
20	9 12 13·94	21 22 21·5	
21	9 14 14·97	21 13 12·5	
22	9 16 15·72	21 3 58·1	
23	9 18 16·20	N.20 54 38·5	
	SUNDAY 12.		
0	9 20 16·41	N.20 45 13·7	
1	9 22 16·35	20 35 43·7	
2	9 24 16·02	20 26 8·7	
3	9 26 15·43	20 16 28·6	
4	9 28 14·57	20 6 43·5	
5	9 30 13·45	19 56 53·4	
6	9 32 12·06	19 46 58·5	
7	9 34 10·41	19 36 58·8	1
8	9 36 8·50	19 26 54·3	1
9	9 38 6·33	19 16 45·1	1
10	9 40 3·90	19 6 31·2	1
11	9 42 1·21	18 56 12·7	1
12	9 43 58·27	18 45 49·6	1
13	9 45 55·08	18 35 22·0	1
14	9 47 51·63	18 24 50·0	1
15	9 49 47·94	18 14 13·6	1
16	9 51 44·00	18 3 32·9	1
17	9 53 39·81	17 52 47·8	1
18	9 55 35·38	17 41 58·5	1
19	9 57 30·71	17 31 5·0	1
20	9 59 25·80	17 20 7·4	1
21	10 1 20·65	17 9 5·7	1
22	10 3 15·27	16 58 0·0	1
23	10 5 9·66	16 46 50·3	1
24	10 7 3·81	N.16 35 36·6	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 13.		
	h m s	° ′ ″	″
0	10 7 3·81	N. 16 35 36·6	112·92
1	10 8 57·73	16 24 19·1	113·57
2	10 10 51·43	16 12 57·7	114·18
3	10 12 44·91	16 1 32·6	114·82
4	10 14 38·16	15 50 3·7	115·42
5	10 16 31·20	15 38 31·2	116·03
6	10 18 24·01	15 26 55·0	116·62
7	10 20 16·62	15 15 15·3	117·22
8	10 22 9·01	15 3 32·0	117·78
9	10 24 1·20	14 51 45·3	118·35
10	10 25 53·18	14 39 55·2	118·92
11	10 27 44·95	14 28 1·7	119·47
12	10 29 36·53	14 16 4·9	120·02
13	10 31 27·91	14 4 4·8	120·55
14	10 33 19·10	13 52 1·5	121·07
15	10 35 10·09	13 39 55·1	121·60
16	10 37 0·90	13 27 45·5	122·10
17	10 38 51·53	13 15 32·9	122·62
18	10 40 41·97	13 3 17·2	123·10
19	10 42 32·23	12 50 58·6	123·60
20	10 44 22·32	12 38 37·0	124·07
21	10 46 12·23	12 26 12·6	124·55
22	10 48 1·97	12 13 45·3	125·00
23	10 49 51·55	N. 12 1 15·3	125·47
	TUESDAY 14.		
0	10 51 40·96	N. 11 48 42·5	125·92
1	10 53 30·21	11 36 7·0	126·35
2	10 55 19·31	11 23 28·9	126·78
3	10 57 8·25	11 10 48·2	127·20
4	10 58 57·05	10 58 5·0	127·63
5	11 0 45·69	10 45 19·2	128·03
6	11 2 34·20	10 32 31·0	128·43
7	11 4 22·56	10 19 40·4	128·83
8	11 6 10·79	10 6 47·4	129·22
9	11 7 58·88	9 53 52·1	129·58
10	11 9 46·84	9 40 54·6	129·97
11	11 11 34·68	9 27 54·8	130·33
12	11 13 22·39	9 14 52·8	130·68
13	11 15 9·98	9 1 48·7	131·03
14	11 16 57·46	8 48 42·5	131·38
15	11 18 44·83	8 35 34·2	131·72
16	11 20 32·09	8 22 23·9	132·03
17	11 22 19·25	8 9 11·7	132·35
18	11 24 6·30	7 55 57·6	132·67
19	11 25 53·26	7 42 41·6	132·97
20	11 27 40·12	7 29 23·8	133·27
21	11 29 26·90	7 16 4·2	133·55
22	11 31 13·59	7 2 42·9	133·85
23	11 33 0·19	6 49 19·8	134·10
24	6·72	N. 6 35 55·2	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 15.		
	h m s	° ′ ″	″
0	11 34 46·72	N. 6 35 55·2	134·38
1	11 36 33·17	6 22 28·9	134·63
2	11 38 19·55	6 9 1·1	134·88
3	11 40 5·87	5 55 31·8	135·13
4	11 41 52·12	5 42 1·0	135·37
5	11 43 38·31	5 28 28·8	135·60
6	11 45 24·45	5 14 55·2	135·83
7	11 47 10·53	5 1 20·2	136·03
8	11 48 56·57	4 47 44·0	136·25
9	11 50 42·57	4 34 6·5	136·45
10	11 52 28·52	4 20 27·8	136·65
11	11 54 14·44	4 6 47·9	136·83
12	11 56 0·33	3 53 6·9	137·02
13	11 57 46·19	3 39 24·8	137·18
14	11 59 32·03	3 25 41·7	137·35
15	12 1 17·85	3 11 57·6	137·50
16	12 3 3·66	2 58 12·6	137·67
17	12 4 49·45	2 44 26·6	137·80
18	12 6 35·24	2 30 39·8	137·93
19	12 8 21·02	2 16 52·2	138·08
20	12 10 6·81	2 3 3·7	138·20
21	12 11 52·60	1 49 14·5	138·30
22	12 13 38·40	1 35 24·7	138·43
23	12 15 24·21	N. 1 21 34·1	138·52
	THURSDAY 16.		
0	12 17 10·04	N. 1 7 43·0	138·62
1	12 18 55·89	0 53 51·3	138·72
2	12 20 41·77	0 39 59·0	138·78
3	12 22 27·68	0 26 6·3	138·87
4	12 24 13·62	N. 0 12 13·1	138·92
5	12 25 59·60	S. 0 1 40·4	139·00
6	12 27 45·63	0 15 34·4	139·03
7	12 29 31·70	0 29 28·6	139·08
8	12 31 17·83	0 43 23·1	139·12
9	12 33 4·01	0 57 17·8	139·15
10	12 34 50·25	1 11 12·7	139·18
11	12 36 36·56	1 25 7·8	139·18
12	12 38 22·94	1 39 2·9	139·20
13	12 40 9·39	1 52 58·1	139·20
14	12 41 55·92	2 6 53·3	139·18
15	12 43 42·53	2 20 48·4	139·18
16	12 45 29·23	2 34 43·5	139·15
17	12 47 16·02	2 48 38·4	139·13
18	12 49 2·91	3 2 33·2	139·08
19	12 50 49·90	3 16 27·7	139·05
20	12 52 36·99	3 30 22·0	139·00
21	12 54 24·19	3 44 16·0	138·93
22	12 56 11·50	3 58 9·6	138·87
23	12 57 58·93	4 12 2·8	138·80
24	12 59 46·49	S. 4 25 55·6	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 17.		
	h m s	° ′ ″	″
0	12 59 46·49	S. 4 25 55·6	138·72
1	13 1 34·17	4 39 47·9	138·63
2	13 3 21·99	4 53 39·7	138·53
3	13 5 9·94	5 7 30·9	138·42
4	13 6 58·03	5 21 21·4	138·32
5	13 8 46·26	5 35 11·3	138·20
6	13 10 34·65	5 49 0·5	138·07
7	13 12 23·19	6 2 48·9	137·93
8	13 14 11·90	6 16 36·5	137·78
9	13 16 0·76	6 30 23·2	137·63
10	13 17 49·80	6 44 9·0	137·47
11	13 19 39·01	6 57 53·8	137·30
12	13 21 28·39	7 11 37·6	137·12
13	13 23 17·96	7 25 20·3	136·95
14	13 25 7·72	7 39 2·0	136·73
15	13 26 57·67	7 52 42·4	136·55
16	13 28 47·82	8 6 21·7	136·33
17	13 30 38·16	8 19 59·7	136·12
18	13 32 28·72	8 33 36·4	135·88
19	13 34 19·48	8 47 11·7	135·63
20	13 36 10·46	9 0 45·5	135·40
21	13 38 1·67	9 14 17·9	135·15
22	13 39 53·09	9 27 48·8	134·88
23	13 41 44·75	S. 9 41 18·1	134·62
	SATURDAY 18.		
0	13 43 36·64	S. 9 54 45·8	134·33
1	13 45 28·77	10 8 11·8	134·03
2	13 47 21·14	10 21 36·0	133·75
3	13 49 13·76	10 34 58·5	133·43
4	13 51 6·63	10 48 19·1	133·10
5	13 52 59·76	11 1 37·7	132·80
6	13 54 53·16	11 14 54·5	132·43
7	13 56 46·82	11 28 9·1	132·10
8	13 58 40·76	11 41 21·7	131·75
9	14 0 34·97	11 54 32·2	131·38
10	14 2 29·46	12 7 40·5	131·00
11	14 4 24·24	12 20 46·5	130·62
12	14 6 19·31	12 33 50·2	130·22
13	14 8 14·68	12 46 51·5	129·82
14	14 10 10·34	12 59 50·4	129·40
15	14 12 6·32	13 12 46·8	128·97
16	14 14 2·60	13 25 40·6	128·53
17	14 15 59·19	13 38 31·8	128·08
18	14 17 56·11	13 51 20·3	127·62
19	14 19 53·35	14 4 6·0	127·15
20	14 21 50·92	14 16 48·9	126·68
21	14 23 48·82	14 29 29·0	126·18
22	14 25 47·06	14 42 6·1	125·67
23	14 27 45·63	14 54 40·1	125·17
24	14 29 44·56	S. 15 7 11·1	

Hour.	Right Ascension.	Declination.	Diff. for
	SUNDAY 19.		
	h m s	° ′ ″	
0	14 29 44·56	S. 15 7 11·1	
1	14 31 43·84	15 19 38·9	
2	14 33 43·47	15 32 3·6	
3	14 35 43·46	15 44 24·9	
4	14 37 43·81	15 56 42·8	
5	14 39 44·54	16 8 57·4	
6	14 41 45·63	16 21 8·4	
7	14 43 47·10	16 33 15·9	
8	14 45 48·96	16 45 19·7	
9	14 47 51·20	16 57 19·8	
10	14 49 53·83	17 9 16·1	
11	14 51 56·85	17 21 8·5	
12	14 54 0·27	17 32 57·0	
13	14 56 4·09	17 44 41·5	
14	14 58 8·32	17 56 21·9	
15	15 0 12·96	18 7 58·1	
16	15 2 18·01	18 19 30·0	
17	15 4 23·48	18 30 57·6	
18	15 6 29·37	18 42 20·8	
19	15 8 35·69	18 53 39·5	
20	15 10 42·43	19 4 53·6	
21	15 12 49·60	19 16 3·1	
22	15 14 57·22	19 27 7·8	
23	15 17 5·27	S. 19 38 7·7	
	MONDAY 20.		
0	15 19 13·76	S. 19 49 2·7	
1	15 21 22·69	19 59 52·7	
2	15 23 32·08	20 10 37·6	
3	15 25 41·91	20 21 17·3	
4	15 27 52·20	20 31 51·8	
5	15 30 2·95	20 42 21·0	
6	15 32 14·15	20 52 44·7	
7	15 34 25·82	21 3 2·9	
8	15 36 37·95	21 13 15·5	
9	15 38 50·55	21 23 22·4	
10	15 41 3·62	21 33 23·5	
11	15 43 17·16	21 43 18·7	
12	15 45 31·18	21 53 8·0	
13	15 47 45·67	22 2 51·2	
14	15 50 0·64	22 12 28·3	
15	15 52 16·09	22 21 59·1	
16	15 54 32·02	22 31 23·6	
17	15 56 48·42	22 40 41·6	
18	15 59 5·32	22 49 53·1	
19	16 1 22·69	22 58 58·0	
20	16 3 40·56	23 7 56·1	
21	16 5 58·91	23 1[illegible]	
22	16 8 17·74	23 [illegible]	
23	16 10 37·07	23 [illegible]	
24	16 12 56·88	S. 2[illegible]	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

ight Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
TUESDAY 21.				*THURSDAY* 23.		
h m s	° ′ ″	″		h m s	° ′ ″	″
6 12 56·88	S. 23 42 39·5	83·85	0	18 13 39·93	S. 27 39 55·8	7·73
6 15 17·18	23 51 2·6	82·62	1	18 16 19·96	27 40 42·2	5·82
6 17 37·97	23 59 18·3	81·38	2	18 19 0·25	27 41 17·1	3·90
6 19 59·24	24 7 26·6	80·15	3	18 21 40·77	27 41 40·5	1·97
6 22 21·00	24 15 27·5	78·87	4	18 24 21·52	27 41 52·3	0·03
6 24 43·25	24 23 20·7	77·58	5	18 27 2·49	27 41 52·5	1·92
6 27 5·99	24 31 6·2	76·28	6	18 29 43·67	27 41 41·0	3·87
6 29 29·21	24 38 43·9	74·98	7	18 32 25·05	27 41 17·8	5·83
6 31 52·92	24 46 13·8	73·63	8	18 35 6·61	27 40 42·8	7·78
6 34 17·10	24 53 35·6	72·28	9	18 37 48·36	27 39 56·1	9·77
6 36 41·77	25 0 49·3	70·93	10	18 40 30·27	27 38 57·5	11·75
6 39 6·92	25 7 54·9	69·53	11	18 43 12·34	27 37 47·0	13·72
6 41 32·55	25 14 52·1	68·15	12	18 45 54·56	27 36 24·7	15·72
6 43 58·65	25 21 41·0	66·73	13	18 48 36·92	27 34 50·4	17·70
6 46 25·23	25 28 21·4	65·28	14	18 51 19·40	27 33 4·2	19·72
6 48 52·28	25 34 53·1	63·85	15	18 54 1·99	27 31 5·9	21·70
6 51 19·79	25 41 16·2	62·40	16	18 56 44·69	27 28 55·7	23·70
6 53 47·77	25 47 30·6	60·90	17	18 59 27·48	27 26 33·5	25·72
6 56 16·21	25 53 36·0	59·40	18	19 2 10·35	27 23 59·2	27·72
6 58 45·11	25 59 32·4	57·90	19	19 4 53·29	27 21 12·9	29·73
7 1 14·47	26 5 19·8	56·37	20	19 7 36·29	27 18 14·5	31·73
7 3 44·28	26 10 58·0	54·82	21	19 10 19·34	27 15 4·1	33·75
7 6 14·53	26 16 26·9	53·27	22	19 13 2·42	27 11 41·6	35·75
7 8 45·23	S. 26 21 46·5	51·68	23	19 15 45·54	S. 27 8 7·1	37·77
WEDNESDAY 22.				*FRIDAY* 24.		
7 11 16·37	S. 26 26 56·6	50·10	0	19 18 28·67	S. 27 4 20·5	39·78
7 13 47·94	26 31 57·2	48·48	1	19 21 11·80	27 0 21·8	41·78
7 16 19·94	26 36 48·1	46·87	2	19 23 54·93	26 56 11·1	43·78
7 18 52·37	26 41 29·3	45·22	3	19 26 38·04	26 51 48·4	45·80
7 21 25·21	26 46 0·6	43·57	4	19 29 21·12	26 47 13·6	47·80
7 23 58·47	26 50 22·0	41·92	5	19 32 4·16	26 42 26·8	49·78
7 26 32·14	26 54 33·5	40·22	6	19 34 47·16	26 37 28·1	51·80
7 29 6·20	26 58 34·8	38·53	7	19 37 30·10	26 32 17·3	53·77
7 31 40·67	27 2 26·0	36·82	8	19 40 12·96	26 26 54·7	55·77
7 34 15·52	27 6 6·9	35·08	9	19 42 55·75	26 21 20·1	57·73
7 36 50·75	27 9 37·4	33·37	10	19 45 38·44	26 15 33·7	59·72
7 39 26·36	27 12 57·6	31·60	11	19 48 21·03	26 9 35·4	61·68
7 42 2·33	27 16 7·2	29·85	12	19 51 3·52	26 3 25·3	63·65
7 44 38·67	27 19 6·3	28·05	13	19 53 45·89	25 57 3·4	65·60
7 47 15·36	27 21 54·6	26·28	14	19 56 28·12	25 50 29·8	67·55
7 49 52·40	27 24 32·3	24·47	15	19 59 10·22	25 43 44·5	69·48
7 52 29·77	27 26 59·1	22·65	16	20 1 52·17	25 36 47·6	71·42
7 55 7·48	27 29 15·0	20·83	17	20 4 33·96	25 29 39·1	73·33
7 57 45·51	27 31 20·0	18·98	18	20 7 15·58	25 22 19·1	75·25
8 0 23·85	27 33 13·9	17·13	19	20 9 57·03	25 14 47·6	77·15
8 3 2·49	27 34 56·7	15·28	20	20 12 38·29	25 7 4·7	79·03
8 5 41·43	27 36 28·4	13·40	21	20 15 19·36	24 59 10·5	80·93
8 20·65	27 37 48·8	11·53	22	20 18 0·23	24 51 4·9	82·78
0·16	27 38 58·0	9·63	23	20 20 40·89	24 42 48·2	84·65
93	S. 27 39 55·8		24	20 23 21·33	S. 24 34 20·3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. for
	SATURDAY 25.				*MONDAY* 27.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	20 23 21·33	S. 24 34 20·3	86·50	0	22 25 44·90	S. 14 41 2·3	154
1	20 26 1·54	24 25 41·3	88·33	1	22 28 9·44	14 25 34·4	153
2	20 28 41·52	24 16 51·3	90·15	2	22 30 33·63	14 10 1·0	152
3	20 31 21·27	24 7 50·4	91·95	3	22 32 57·48	13 54 22·3	151
4	20 34 0·76	23 58 38·7	93·75	4	22 35 20·99	13 38 38·4	150
5	20 36 40·00	23 49 16·2	95·53	5	22 37 44·17	13 22 49·5	149
6	20 39 18·98	23 39 43·0	97·28	6	22 40 7·01	13 6 55·7	148
7	20 41 57·69	23 29 59·3	99·03	7	22 42 29·52	12 50 57·1	147
8	20 44 36·12	23 20 5·1	100·78	8	22 44 51·70	12 34 53·8	146
9	20 47 14·28	23 10 0·4	102·50	9	22 47 13·55	12 18 46·1	145
10	20 49 52·16	22 59 45·4	104·20	10	22 49 35·08	12 2 33·9	144
11	20 52 29·74	22 49 20·2	105·88	11	22 51 56·29	11 46 17·6	143
12	20 55 7·03	22 38 44·9	107·55	12	22 54 17·19	11 29 57·1	142
13	20 57 44·01	22 27 59·6	109·22	13	22 56 37·77	11 13 32·7	141
14	21 0 20·69	22 17 4·3	110·85	14	22 58 58·04	10 57 4·4	140
15	21 2 57·06	22 5 59·2	112·45	15	23 1 18·00	10 40 32·5	139
16	21 5 33·11	21 54 44·5	114·07	16	23 3 37·66	10 23 57·0	138
17	21 8 8·84	21 43 20·1	115·65	17	23 5 57·02	10 7 18·0	137
18	21 10 44·25	21 31 46·2	117·22	18	23 8 16·09	9 50 35·8	136
19	21 13 19·34	21 20 2·9	118·77	19	23 10 34·86	9 33 50·4	135
20	21 15 54·09	21 8 10·3	120·28	20	23 12 53·35	9 17 2·0	134
21	21 18 28·50	20 56 8·6	121·80	21	23 15 11·55	9 0 10·7	133
22	21 21 2·58	20 43 57·8	123·28	22	23 17 29·47	8 43 16·6	132
23	21 23 36·32	S. 20 31 38·1	124·77	23	23 19 47·12	S. 8 26 19·9	131
	SUNDAY 26.				*TUESDAY* 28.		
0	21 26 9·72	S. 20 19 9·5	126·22	0	23 22 4·49	S. 8 9 20·7	130
1	21 28 42·77	20 6 32·2	127·65	1	23 24 21·60	7 52 19·1	129
2	21 31 15·48	19 53 46·3	129·05	2	23 26 38·44	7 35 15·3	128
3	21 33 47·83	19 40 52·0	130·45	3	23 28 55·03	7 18 9·4	127
4	21 36 19·83	19 27 49·3	131·80	4	23 31 11·36	7 1 1·4	126
5	21 38 51·49	19 14 38·5	133·17	5	23 33 27·45	6 43 51·7	125
6	21 41 22·78	19 1 19·5	134·48	6	23 35 43·29	6 26 40·2	124
7	21 43 53·72	18 47 52·6	135·80	7	23 37 58·89	6 9 27·0	123
8	21 46 24·30	18 34 17·8	137·08	8	23 40 14·25	5 52 12·4	122
9	21 48 54·53	18 20 35·3	138·33	9	23 42 29·38	5 34 56·5	121
10	21 51 24·40	18 6 45·3	139·60	10	23 44 44·28	5 17 39·3	120
11	21 53 53·90	17 52 47·7	140·80	11	23 46 58·96	5 0 21·1	119
12	21 56 23·05	17 38 42·9	142·00	12	23 49 13·43	4 43 1·8	118
13	21 58 51·83	17 24 30·9	143·18	13	23 51 27·68	4 25 41·7	117
14	22 1 20·26	17 10 11·8	144·32	14	23 53 41·73	4 8 20·8	116
15	22 3 48·32	16 55 45·9	145·47	15	23 55 55·57	3 50 59·4	115
16	22 6 16·03	16 41 13·1	146·57	16	23 58 9·21	3 33 37·4	114
17	22 8 43·38	16 26 33·7	147·67	17	0 0 22·67	3 16 15·1	113
18	22 11 10·37	16 11 47·7	148·73	18	0 2 35·93	2 58 52·5	112
19	22 13 37·01	15 56 55·3	149·77	19	0 4 49·01	2 41 29·8	111
20	22 16 3·29	15 41 56·7	150·78	20	0 7 1·91	2 24 7·0	110
21	22 18 29·22	15 26 52·0	151·80	21	0 9 14·63	2 6 44·	
22	22 20 54·80	15 11 41·2	152·77	22	0 11 27·19	1 49	
23	22 23 20·02	14 56 24·6	153·72	23	0 13 39·58	1 ··	
24	22 25 44·90	S. 14 41 2·3		24	0 15 51·82	S. 1	

MEAN TIME

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 29.		
	h m s	° ′ ″	″
0	0 15 51·82	S. 1 14 38·0	173·53
1	0 18 3·90	0 57 16·8	173·42
2	0 20 15·83	0 39 56·3	173·28
3	0 22 27·62	0 22 36·6	173·15
4	0 24 39·27	S. 0 5 17·7	172·97
5	0 26 50·78	N. 0 12 0·1	172·80
6	0 29 2·16	0 29 16·9	172·58
7	0 31 13·42	0 46 32·4	172·38
8	0 33 24·56	1 3 46·7	172·13
9	0 35 35·59	1 20 59·5	171·88
10	0 37 46·50	1 38 10·8	171·62
11	0 39 57·31	1 55 20·5	171·32
12	0 42 8·02	2 12 28·4	171·02
13	0 44 18·64	2 29 34·5	170·68
14	0 46 29·16	2 46 38·6	170·35
15	0 48 39·60	3 3 40·7	170·00
16	0 50 49·96	3 20 40·7	169·62
17	0 53 0·24	3 37 38·4	169·23
18	0 55 10·45	3 54 33·8	168·83
19	0 57 20·60	4 11 26·8	168·40
20	0 59 30·68	4 28 17·2	167·97
21	1 1 40·70	4 45 5·0	167·50
22	1 3 50·68	5 1 50·0	167·05
23	1 6 0·60	N. 5 18 32·3	166·55
	THURSDAY 30.		
0	1 8 10·48	N. 5 35 11·6	166·05
1	1 10 20·32	5 51 47·9	165·55
2	1 12 30·13	6 8 21·2	165·00
3	1 14 39·91	6 24 51·2	164·47
4	1 16 49·67	6 41 18·0	163·90
5	1 18 59·40	6 57 41·4	163·32
6	1 21 9·12	7 14 1·3	162·73
7	1 23 18·83	7 30 17·7	162·13
8	1 25 28·52	7 46 30·5	161·52
9	1 27 38·22	8 2 39·6	160·87
10	1 29 47·91	8 18 44·8	160·23
11	1 31 57·61	8 34 46·2	159·57
12	1 34 7·32	8 50 43·6	158·90
13	1 36 17·04	9 6 37·0	158·20
14	1 38 26·77	9 22 26·2	157·50
15	1 40 36·53	9 38 11·2	156·78
16	1 42 46·31	9 53 51·9	156·05
17	1 44 56·11	10 9 28·2	155·32
18	1 47 5·95	10 25 0·1	154·55
19	1 49 15·83	10 40 27·4	153·78
20	1 51 25·74	10 55 50·1	153·00
	35·70	11 11 8·1	152·22
	·71	11 26 21·4	151·40
		11 41 29·8	150·58
		N. 11 56 33·3	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 31.		
	h m s	° ′ ″	″
0	2 0 5·89	N. 11 56 33·3	149·75
1	2 2 16·06	12 11 31·8	148·90
2	2 4 26·29	12 26 25·2	148·05
3	2 6 36·59	12 41 13·5	147·18
4	2 8 46·96	12 55 56·6	146·30
5	2 10 57·39	13 10 34·4	145·42
6	2 13 7·90	13 25 6·9	144·50
7	2 15 18·49	13 39 33·9	143·58
8	2 17 29·16	13 53 55·4	142·67
9	2 19 39·90	14 8 11·4	141·72
10	2 21 50·74	14 22 21·7	140·78
11	2 24 1·66	14 36 26·4	139·82
12	2 26 12·67	14 50 25·3	138·85
13	2 28 23·78	15 4 18·4	137·87
14	2 30 34·98	15 18 5·6	136·87
15	2 32 46·28	15 31 46·8	135·87
16	2 34 57·68	15 45 22·0	134·85
17	2 37 9·18	15 58 51·1	133·83
18	2 39 20·79	16 12 14·1	132·80
19	2 41 32·51	16 25 30·9	131·75
20	2 43 44·34	16 38 41·4	130·70
21	2 45 56·28	16 51 45·6	129·63
22	2 48 8·33	17 4 43·4	128·57
23	2 50 20·50	N. 17 17 34·8	127·47
	SATURDAY, SEPT. 1.		
0	2 52 32·79	N. 17 30 19·6	

PHASES OF THE MOON.

	d	h	m
☾ *Last Quarter*	4	9	21·2
● New Moon	12	6	52·4
☽ *First Quarter*	20	8	33·5
○ Full Moon	27	1	20·9

	d	h
☾ Apogee	13	4
☾ Perigee	26	23

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Aquilæ W.	61 43 34	3253	63 8 40	3230	64 34 13	3212	66 0 8	3196
	Jupiter W.	24 22 9	2142	26 12 4	2150	28 1 47	2159	29 51 16	2169
	α Arietis E.	43 12 25	2285	41 26 3	2310	39 40 18	2337	37 55 13	2366
	Aldebaran E.	73 7 7	2178	71 18 6	2192	69 29 26	2207	67 41 9	2222
	Saturn E.	91 14 9	2179	89 25 10	2192	87 36 31	2206	85 48 13	2221
	Mars E.	105 45 6	2341	104 0 7	2355	102 15 28	2370	100 31 10	2384
	Sun E.	134 6 3	2457	132 23 49	2470	130 41 53	2482	129 0 15	2496
2	α Aquilæ W.	73 13 10	3162	74 40 5	3162	76 6 59	3164	77 33 51	3168
	Fomalhaut W.	40 38 13	2690	42 15 6	2676	43 52 18	2666	45 29 43	2660
	Jupiter W.	38 54 25	2232	40 42 5	2247	42 29 22	2261	44 16 19	2276
	Aldebaran E.	58 45 39	2306	56 59 49	2324	55 14 25	2344	53 29 29	2362
	Saturn E.	76 52 11	2297	75 6 7	2313	73 20 27	2330	71 35 11	2347
	Mars E.	91 55 3	2463	90 12 57	2480	88 31 15	2497	86 49 57	2513
	Sun E.	120 37 7	2572	118 57 34	2588	117 18 23	2604	115 39 34	2621
3	α Aquilæ W.	84 46 18	3214	86 12 11	3226	87 37 49	3241	89 3 10	3256
	Fomalhaut W.	53 37 59	2660	55 15 33	2665	56 53 0	2671	58 30 19	2678
	Jupiter W.	53 5 27	2354	54 50 8	2369	56 34 27	2385	58 18 23	2401
	Aldebaran E.	44 51 54	2465	43 9 52	2488	41 28 22	2511	39 47 24	2535
	Saturn E.	62 54 55	2431	61 12 5	2448	59 29 39	2466	57 47 38	2484
	Mars E.	78 29 19	2600	76 50 24	2617	75 11 52	2635	73 33 44	2652
	Sun E.	107 31 16	2707	105 54 46	2725	104 18 40	2742	102 42 56	2760
4	Jupiter W.	66 52 22	2480	68 34 3	2496	70 15 22	2512	71 56 19	2527
	Fomalhaut W.	66 34 10	2725	68 10 17	2736	69 46 9	2747	71 21 46	2759
	α Pegasi W.	48 22 49	3186	49 49 15	3169	51 16 1	3155	52 43 4	3144
	Saturn E.	49 23 43	2572	47 44 9	2590	46 5 0	2607	44 26 14	2625
	Mars E.	65 28 56	2739	63 53 8	2756	62 17 43	2773	60 42 40	2791
	Sun E.	94 50 5	2847	93 16 38	2865	91 43 34	2882	90 10 52	2899
5	Jupiter W.	80 15 50	2601	81 54 44	2616	83 33 17	2629	85 11 32	2643
	Fomalhaut W.	79 15 55	2821	80 49 55	2834	82 23 39	2847	83 57 6	2859
	α Pegasi W.	60 0 43	3120	61 28 28	3119	62 56 15	3121	64 23 59	3122
	Saturn E.	36 18 32	2716	34 42 13	2734	33 6 19	2753	31 30 50	2773
	Mars E.	52 52 54	2873	51 20 1	2889	49 47 28	2905	48 15 15	2920
	Sun E.	82 32 41	2981	81 2 4	2997	79 31 48	3013	78 1 51	3028
6	Jupiter W.	93 18 11	2710	94 54 38	2723	96 30 48	2734	98 6 43	2746
	Fomalhaut W.	91 40 10	2925	93 11 57	2939	94 43 26	2951	96 14 40	2965
	α Pegasi W.	71 41 52	3143	73 9 10	3148	74 36 21	3155	76 3 24	3162
	α Arietis W.	28 6 12	3052	29 35 20	3036	31 4 48	3023	32 34 32	3014
	Mars E.	40 39 5	2997	39 8 48	3012	37 38 50	3026	36 9 10	3041
	Sun E.	70 36 45	3101	69 8 37	3116	67 40 47	3129	66 13 13	3143
7	Jupiter W.	106 2 27	2802	107 36 53	2812	109 11 5	2822	110 45 4	2832
	α Pegasi W.	83 16 31	3200	84 42 40	3208	86 8 40	3218	87 34 28	3226
	α Arietis W.	40 5 6	2998	41 35 21	2999	43 5 35	3000	44 35 48	3003
	Mars E.	28 45 23	3116	27 17 33	3132	25 50 2	3148	24 22 51	3165
	Sun E.	58 59 20	3206	57 33 18	3219	56 7 31	3230	54 41 57	3242
8	α Arietis W.	52 5 59	3019	53 35 48	3023	55 5 32	3027	56 35 11	3032
	Aldebaran W.	22 5 10	3208	23 31 10	3182	24 57 41	3161	26 24 37	3145

MEAN TIME.

LUNAR DISTANCES.

the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Aquilæ	W.	67 26 22	3184	68 52 50	3174	70 19 30	3168	71 46 18	3164
	Jupiter	W.	31 40 30	2180	33 29 27	2192	35 18 6	2205	37 6 26	2219
	α Arietis	E.	36 10 50	2398	34 27 13	2433	32 44 26	2472	31 2 34	2515
	Aldebaran	E.	65 53 14	2238	64 5 43	2255	62 18 37	2271	60 31 55	2289
	Saturn	E.	84 0 16	2235	82 12 41	2250	80 25 28	2266	78 38 38	2281
	Mars	E.	98 47 13	2399	97 3 37	2414	95 20 23	2430	93 37 31	2447
	Sun	E.	127 18 56	2510	125 37 57	2526	123 57 20	2540	122 17 2	2556
2	α Aquilæ	W.	79 0 38	3174	80 27 18	3182	81 53 49	3190	83 20 10	3201
	Fomalhaut	W.	47 7 17	2655	48 44 57	2654	50 22 39	2654	52 0 21	2657
	Jupiter	W.	46 2 53	2291	47 49 5	2306	49 34 55	2322	51 20 22	2337
	Aldebaran	E.	51 45 0	2382	50 1 0	2402	48 17 28	2423	46 34 26	2444
	Saturn	E.	69 50 20	2363	68 5 52	2380	66 21 48	2397	64 38 9	2414
	Mars	E.	85 9 2	2530	83 28 30	2548	81 48 23	2564	80 8 39	2582
	Sun	E.	114 1 8	2638	112 23 5	2656	110 45 26	2672	109 8 9	2690
3	α Aquilæ	W.	90 28 13	3274	91 52 55	3291	93 17 17	3311	94 41 16	3331
	Fomalhaut	W.	60 7 29	2686	61 44 28	2695	63 21 15	2704	64 57 49	2714
	Jupiter	W.	60 1 56	2417	61 45 7	2433	63 27 54	2448	65 10 20	2465
	Aldebaran	E.	38 7 0	2560	36 27 10	2587	34 47 57	2614	33 9 21	2643
	Saturn	E.	56 6 2	2502	54 24 51	2519	52 44 4	2536	51 3 41	2554
	Mars	E.	71 55 59	2669	70 18 38	2687	68 41 41	2705	67 5 7	2722
	Sun	E.	101 7 36	2778	99 32 39	2795	97 58 5	2813	96 23 54	2830
4	Jupiter	W.	73 36 55	2542	75 17 10	2557	76 57 4	2572	78 36 37	2587
	Fomalhaut	W.	72 57 8	2771	74 32 14	2783	76 7 4	2795	77 41 38	2808
	α Pegasi	W.	54 10 20	3136	55 37 46	3129	57 5 20	3124	58 33 0	3122
	Saturn	E.	42 47 53	2643	41 9 56	2661	39 32 24	2679	37 55 16	2697
	Mars	E.	59 8 0	2807	57 33 41	2824	55 59 44	2840	54 26 8	2857
	Sun	E.	88 38 32	2916	87 6 33	2932	85 34 55	2948	84 3 37	2965
5	Jupiter	W.	86 49 28	2657	88 27 5	2670	90 4 25	2684	91 41 26	2696
	Fomalhaut	W.	85 30 17	2873	87 3 10	2886	88 35 47	2899	90 8 7	2912
	α Pegasi	W.	65 51 42	3124	67 19 22	3128	68 46 57	3133	70 14 27	3137
	Saturn	E.	29 55 47	2794	28 21 11	2815	26 47 2	2838	25 13 23	2862
	Mars	E.	46 43 22	2936	45 11 49	2951	43 40 35	2967	42 9 41	2981
	Sun	E.	76 32 13	3043	75 2 54	3058	73 33 53	3073	72 5 10	3087
6	Jupiter	W.	99 42 22	2758	101 17 45	2769	102 52 54	2781	104 27 47	2791
	Fomalhaut	W.	97 45 36	2978	99 16 16	2991	100 46 40	3005	102 16 47	3018
	α Pegasi	W.	77 30 19	3169	78 57 5	3176	80 23 43	3183	81 50 12	3192
	α Arietis	W.	34 4 27	3007	35 34 31	3003	37 4 40	3001	38 34 52	2999
	Mars	E.	34 39 48	3056	33 10 45	3071	31 42 0	3085	30 13 32	3100
	Sun	E.	64 45 55	3156	63 18 53	3169	61 52 7	3182	60 25 36	3194
7	Jupiter	W.	112 18 50	2842	113 52 23	2851	115 25 45	2860	116 58 55	2869
	α Pegasi	W.	89 0 6	3235	90 25 34	3245	91 50 50	3254	93 15 55	3264
	α Arietis	W.	46 5 57	3005	47 36 4	3009	49 6 6	3011	50 36 5	3015
	Mars	E.	22 56 0	3183	21 29 31	3203	20 3 25	3225	18 37 45	3249
	N	E.	53 16 37	3253	51 51 31	3264	50 26 37	3275	49 1 56	3286
	8	W.	58 4 44	3035	59 34 13	3040	61 3 36	3044	62 32 54	3049
			27 51 52	3133	29 19 22	3123	30 47 4	3115	32 14 55	3109

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
8	Sun	E.	47 37 28	3296	46 13 12	3306	44 49 8	3316	43 25 15	3327
9	α Arietis	W.	64 2 6	3053	65 31 13	3058	67 0 14	3061	68 29 11	3066
	Aldebaran	W.	33 42 54	3105	35 10 58	3101	36 39 6	3099	38 7 17	3097
	Sun	E.	36 28 49	3378	35 6 7	3387	33 43 36	3397	32 21 16	3408
15	Sun	W.	29 44 52	3489	31 5 28	3481	32 26 13	3474	33 47 6	3467
	Spica ♍	E.	30 43 21	3088	29 14 57	3087	27 46 32	3088	26 18 8	3088
	Antares	E.	76 30 32	3061	75 1 35	3059	73 32 35	3055	72 3 30	3052
16	Sun	W.	40 33 36	3430	41 55 19	3422	43 17 10	3415	44 39 10	3407
	Antares	E.	64 36 57	3031	63 7 22	3026	61 37 41	3020	60 7 53	3014
17	Sun	W.	51 31 28	3365	52 54 25	3355	54 17 33	3345	55 40 52	3336
	Antares	E.	52 37 0	2982	51 6 25	2974	49 35 39	2966	48 4 44	2958
	α Aquilæ	E.	101 30 17	3847	100 16 3	3830	99 1 32	3816	97 46 46	3801
18	Sun	W.	62 40 24	3282	64 4 57	3270	65 29 43	3258	66 54 44	3246
	Venus	W.	20 55 21	3312	22 19 19	3281	23 43 53	3253	25 9 0	3226
	Antares	E.	40 27 27	2913	38 55 24	2903	37 23 9	2892	35 50 40	2882
	α Aquilæ	E.	91 29 23	3739	90 13 17	3728	88 57 0	3718	87 40 32	3709
19	Sun	W.	74 3 36	3178	75 30 11	3163	76 57 4	3149	78 24 14	3134
	Venus	W.	32 21 42	3116	33 49 32	3096	35 17 46	3076	36 46 25	3056
	Spica ♍	W.	18 12 34	2883	19 45 14	2860	21 18 24	2839	22 52 1	2818
	Antares	E.	28 4 47	2825	26 30 52	2813	24 56 41	2802	23 22 15	2790
	α Aquilæ	E.	81 16 2	3674	79 58 47	3669	78 41 27	3665	77 24 3	3662
	Jupiter	E.	107 55 5	2778	106 20 8	2764	104 44 53	2751	103 9 21	2737
20	Sun	W.	85 44 50	3053	87 13 57	3036	88 43 25	3019	90 13 14	3002
	Venus	W.	44 15 39	2960	45 46 42	2940	47 18 10	2921	48 50 2	2901
	Spica ♍	W.	30 46 25	2726	32 22 30	2708	33 58 59	2690	35 35 52	2672
	α Aquilæ	E.	70 56 42	3665	69 39 18	3671	68 22 0	3678	67 4 49	3686
	Jupiter	E.	95 6 56	2664	93 29 28	2648	91 51 38	2632	90 13 27	2616
	Fomalhaut	E.	98 4 50	2886	96 32 13	2869	94 59 15	2852	93 25 55	2836
21	Sun	W.	97 47 55	2911	99 20 0	2892	100 52 29	2873	102 25 22	2854
	Venus	W.	56 35 41	2802	58 10 6	2782	59 44 57	2762	61 20 15	2742
	Spica ♍	W.	43 46 18	2582	45 25 37	2564	47 5 21	2545	48 45 31	2527
	α Aquilæ	E.	60 41 59	3766	59 26 21	3790	58 11 8	3819	56 56 26	3852
	Jupiter	E.	81 56 59	2533	80 16 32	2516	78 35 41	2499	76 54 26	2481
	Fomalhaut	E.	85 33 50	2753	83 58 20	2736	82 22 28	2720	80 46 15	2704
22	Sun	W.	110 16 0	2758	111 51 23	2739	113 27 11	2720	115 3 25	2701
	Venus	W.	69 23 26	2641	71 1 26	2621	72 39 53	2600	74 18 48	2580
	Spica ♍	W.	57 12 45	2435	58 55 30	2416	60 38 42	2398	62 22 20	2379
	Jupiter	E.	68 21 59	2393	66 38 14	2375	64 54 3	2357	63 9 27	2340
	Fomalhaut	E.	72 39 57	2629	71 1 41	2615	69 23 6	2602	67 44 13	2589
	α Pegasi	E.	93 23 42	2783	91 48 52	2765	90 13 38	2746	88 37 59	2728
23	Sun	W.	123 10 54	2607	124 49 40	2589	126 28 50	2572	128 8 23	2554
	Venus	W.	82 40 13	2482	84 21 51	2463	86 3 56	2444	87 46 28	2426
	Spica ♍	W.	71 7 7	2289	72 53 23	2271	74 40 5	2254	76 27 13	2237
	Antares	W.	25 12 53	2293	26 59 3	2275	28 45 40	2256	30 32 45	2238
	Jupiter	E.	54 20 3	2254	52 32 55	2237	50 45 22	2220	48 57 24	2204

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
8	Sun	E.	42 1 35	3337	40 38 6	3347	39 14 49	3357	37 51 43	3367
9	α Arietis	W.	69 58 2	3069	71 26 49	3074	72 55 30	3078	74 24 6	3082
	Aldebaran	W.	39 35 30	3096	41 3 45	3096	42 32 0	3096	44 0 15	3096
	Sun	E.	30 59 9	3419	29 37 14	3431	28 15 32	3443	26 54 4	3456
15	Sun	W.	35 8 7	3459	36 29 17	3452	37 50 35	3444	39 12 2	3438
	Spica ♍	E.	24 49 44	3088	23 21 20	3091	21 52 59	3093	20 24 41	3097
	Antares	E.	70 34 22	3048	69 5 8	3044	67 35 50	3039	66 6 26	3035
16	Sun	W.	46 1 19	3399	47 23 37	3391	48 46 4	3382	50 8 41	3373
	Antares	E.	58 37 58	3009	57 7 56	3002	55 37 46	2995	54 7 27	2989
17	Sun	W.	57 4 22	3326	58 28 4	3315	59 51 58	3304	61 16 5	3294
	Antares	E.	46 33 39	2950	45 2 23	2941	43 30 56	2931	41 59 17	2923
	α Aquilæ	E.	96 31 45	3787	95 16 29	3774	94 1 0	3762	92 45 18	3749
18	Sun	W.	68 19 59	3232	69 45 30	3219	71 11 16	3206	72 37 18	3193
	Venus	W.	26 34 38	3203	28 0 44	3180	29 27 17	3158	30 54 17	3137
	Antares	E.	34 17 58	2871	32 45 2	2860	31 11 52	2849	29 38 27	2837
	α Aquilæ	E.	86 23 55	3700	85 7 8	3693	83 50 14	3685	82 33 11	3679
19	Sun	W.	79 51 43	3118	81 19 31	3102	82 47 38	3087	84 16 4	3070
	Venus	W.	38 15 28	3038	39 44 54	3018	41 14 45	2998	42 45 0	2979
	Spica ♍	W.	24 26 5	2799	26 0 34	2781	27 35 27	2763	29 10 44	2744
	Antares	E.	21 47 34	2778	20 12 37	2767	18 37 26	2755	17 1 59	2746
	α Aquilæ	E.	76 6 36	3661	74 49 7	3661	73 31 38	3661	72 14 9	3662
	Jupiter	E.	101 33 30	2723	99 57 21	2708	98 20 52	2694	96 44 4	2679
20	Sun	W.	91 43 25	2984	93 13 58	2965	94 44 54	2947	96 16 13	2929
	Venus	W.	50 22 19	2882	51 55 1	2862	53 28 9	2842	55 1 42	2822
	Spica ♍	W.	37 13 9	2655	38 50 49	2636	40 28 55	2619	42 7 24	2601
	α Aquilæ	E.	65 47 47	3697	64 30 57	3710	63 14 21	3725	61 58 0	3744
	Jupiter	E.	88 34 54	2601	86 56 0	2584	85 16 43	2567	83 37 2	2551
	Fomalhaut	E.	91 52 14	2818	90 18 10	2802	88 43 45	2786	87 8 59	2769
21	Sun	W.	103 58 40	2835	105 32 23	2816	107 6 30	2797	108 41 2	2777
	Venus	W.	62 55 59	2722	64 32 10	2702	66 8 48	2681	67 45 54	2661
	Spica ♍	W.	50 26 6	2509	52 7 7	2491	53 48 33	2472	55 30 26	2453
	α Aquilæ	E.	55 42 17	3889	54 28 46	3932	53 15 59	3981	52 4 1	4037
	Jupiter	E.	75 12 46	2464	73 30 42	2446	71 48 13	2428	70 5 18	2411
	Fomalhaut	E.	79 9 41	2689	77 32 46	2673	75 55 30	2658	74 17 53	2643
22	Sun	W.	116 40 4	2681	118 17 9	2663	119 54 39	2644	121 32 34	2626
	Venus	W.	75 58 10	2560	77 38 0	2540	79 18 17	2521	80 59 1	2501
	Spica ♍	W.	64 6 25	2361	65 50 56	2343	67 35 53	2324	69 21 17	230[illegible]
	Jupiter	E.	61 24 25	2322	59 38 58	2304	57 53 5	2287	56 6 47	22
	Fomalhaut	E.	66 5 3	2577	64 25 36	2565	62 45 53	2555	61 5 56	
	α Pegasi	E.	87 1 57	2711	85 25 32	2695	83 48 45	2680	82 11 3	
23	Sun	W.	129 48 21	2538	131 28 42	2521	133 9 26	2505	134 50	
	Venus	W.	89 29 25	2408	91 12 49	2390	92 56 38	2373	94 40	
	Spica ♍	W.	78 14 46	2219	80 2 45	2203	81 51 8	2187	83 39	
	Antares	W.	32 20 16	2220	34 8 14	2203	35 56 37	2186	37 45	
	Jupiter	E.	47 9 2	2188	45 20 17	2173	43 31 9	2158	41 4[illegible]	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	Fomalhaut E.	59 25 45	2537	57 45 23	2530	56 4 51	2524	54 24 11	2520
	α Pegasi E.	80 34 11	2651	78 56 25	2638	77 18 21	2626	75 40 2	2615
24	Venus W.	96 25 29	2340	98 10 31	2324	99 55 56	2308	101 41 44	2293
	Spica ♍ W.	85 29 6	2155	87 18 41	2141	89 8 38	2126	90 58 58	2112
	Antares W.	39 34 39	2154	41 24 16	2139	43 14 16	2124	45 4 39	2109
	Jupiter E.	39 51 46	2130	38 1 33	2117	36 10 59	2105	34 20 7	2093
	Fomalhaut E.	46 0 17	2530	44 19 46	2542	42 39 31	2556	40 59 36	2576
	α Pegasi E.	67 25 13	2580	65 45 50	2577	64 6 24	2577	62 26 57	2578
25	Antares W.	54 21 49	2046	56 14 12	2035	58 6 52	2025	59 59 48	2015
	α Pegasi E.	54 11 20	2625	52 32 59	2644	50 55 4	2667	49 17 40	2696
	α Arietis E.	94 8 27	2108	92 17 40	2097	90 26 37	2087	88 35 18	2078
26	Antares W.	69 27 51	1977	71 22 1	1972	73 16 19	1968	75 10 44	1965
	α Pegasi E.	41 22 44	2935	39 51 10	3010	38 21 10	3098	36 52 58	3202
	α Arietis E.	79 15 32	2043	77 23 5	2039	75 30 32	2036	73 37 54	2034
	Aldebaran E.	109 36 31	2024	107 43 35	2018	105 50 28	2013	103 57 14	2009
27	Antares W.	84 43 46	1959	86 38 25	1960	88 33 2	1962	90 27 37	1965
	α Aquilæ W.	46 21 49	3923	47 34 45	3804	48 49 43	3699	50 6 31	3606
	α Arietis E.	64 14 28	2039	62 21 54	2043	60 29 27	2048	58 37 8	2055
	Aldebaran E.	94 29 51	2001	92 36 18	2002	90 42 46	2004	88 49 18	2007
	Saturn E.	115 9 19	2000	113 15 45	2001	111 22 12	2002	109 28 41	2005
28	α Aquilæ W.	56 52 36	3275	58 17 16	3231	59 42 49	3192	61 9 8	3158
	Jupiter W.	21 29 56	2008	23 23 18	2008	25 16 40	2009	27 10 0	2014
	α Arietis E.	49 18 45	2108	47 27 58	2122	45 37 32	2139	43 47 32	2158
	Aldebaran E.	79 23 36	2035	77 30 57	2043	75 38 30	2053	73 46 18	2063
	Saturn E.	100 2 32	2030	98 9 44	2037	96 17 8	2045	94 24 44	2054
29	α Aquilæ W.	68 29 7	3053	69 58 14	3043	71 27 33	3036	72 57 1	3031
	Jupiter W.	36 34 18	2053	38 26 29	2064	40 18 23	2077	42 9 58	2089
	Fomalhaut W.	35 35 40	2638	37 13 43	2604	38 52 33	2577	40 32 0	2556
	α Arietis E.	34 45 39	2287	32 59 20	2322	31 13 52	2363	29 29 24	2409
	Aldebaran E.	64 29 32	2124	62 39 10	2139	60 49 11	2155	58 59 35	2171
	Saturn E.	85 6 34	2109	83 15 49	2122	81 25 24	2136	79 35 20	2150
	Mars E.	115 12 20	2273	113 25 41	2286	111 39 21	2299	109 53 20	2314
30	α Aquilæ W.	80 24 47	3044	81 54 5	3052	83 23 13	3064	84 52 7	3077
	Jupiter W.	51 22 48	2161	53 12 14	2176	55 1 17	2192	56 49 56	2210
	Fomalhaut W.	48 54 31	2512	50 35 28	2512	52 16 25	2513	53 57 20	2517
	Aldebaran E.	49 58 8	2264	48 11 16	2285	46 24 55	2307	44 39 6	2331
	Saturn E.	70 30 37	2229	68 42 52	2246	66 55 33	2264	65 8 40	2281
	Mars E.	101 8 45	2393	99 25 0	2410	97 41 40	2427	95 58 44	2445
	Sun E.	138 38 24	2515	136 57 32	2531	135 17 2	2548	133 36 55	2564
31	Jupiter W.	65 46 48	2296	67 32 53	2315	69 18 31	2333	71 3 43	2351
	Fomalhaut W.	62 19 47	2559	63 59 39	2570	65 39 15	2583	67 18 33	2596
	α Pegasi W.	44 25 34	3104	45 53 39	3078	47 22 16	3056	48 51 20	3039
	Saturn E.	56 20 56	2375	54 36 46	2396	52 53 5	2415	51 9 52	2435
	Pollux E.	79 13 20	2328	77 28 1	2346	75 43 9	2365	73 58 44	2383
	Mars E.	87 30 32	2538	85 50 12	2558	84 10 20	2577	82 30 54	2596
	Sun E.	125 22 20	2655	123 44 40	2675	122 7 26	2693	120 30 37	2713

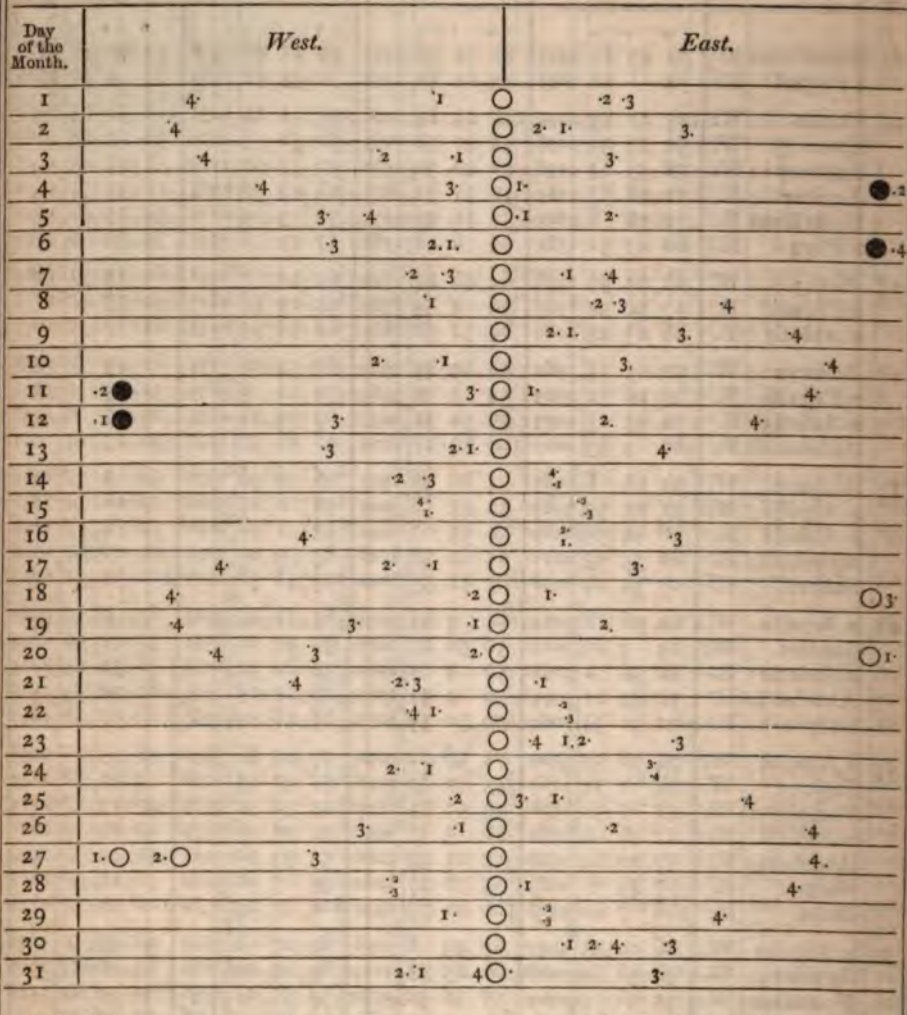
MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	Fomalhaut E.	52 43 25	2517	51 2 36	2517	49 21 46	2518	47 40 58	2523
	α Pegasi E.	74 1 28	2605	72 22 40	2596	70 43 40	2589	69 4 30	2584
24	Venus W.	103 27 53	2279	105 14 24	2266	107 1 14	2252	108 48 24	2240
	Spica ♍ W.	92 49 39	2098	94 40 41	2085	96 32 3	2073	98 23 44	2060
	Antares W.	46 55 24	2096	48 46 30	2082	50 37 57	2070	52 29 43	2057
	Jupiter E.	32 28 57	2083	30 37 31	2073	28 45 50	2065	26 53 57	2058
	Fomalhaut E.	39 20 8	2601	37 41 15	2633	36 3 5	2672	34 25 48	2722
	α Pegasi E.	60 47 32	2582	59 8 12	2588	57 29 1	2597	55 50 2	2610
25	Antares W.	61 52 59	2006	63 46 24	1998	65 40 2	1991	67 33 51	1984
	α Pegasi E.	47 40 55	2729	46 4 54	2769	44 29 46	2817	42 55 40	2871
	α Arietis E.	86 43 45	2069	84 51 58	2061	82 59 59	2055	81 7 50	2049
26	Antares W.	77 5 14	1962	78 59 49	1960	80 54 26	1958	82 49 6	1958
	α Pegasi E.	35 26 51	3323	34 3 6	3464	32 42 2	3632	31 24 2	3831
	α Arietis E.	71 45 13	2033	69 52 31	2033	67 59 48	2034	66 7 6	2036
	Aldebaran E.	102 3 53	2005	100 10 27	2003	98 16 57	2001	96 23 24	2001
27	Antares W.	92 22 6	1969	94 16 30	1973	96 10 46	1978	98 4 55	1985
	α Aquilæ W.	51 24 59	3523	52 44 58	3449	54 6 19	3384	55 28 54	3326
	α Arietis E.	56 44 59	2063	54 53 3	2072	53 1 20	2082	51 9 53	2094
	Aldebaran E.	86 55 55	2011	85 2 38	2016	83 9 28	2021	81 16 27	2028
	Saturn E.	107 35 14	2008	105 41 53	2012	103 48 38	2017	101 55 31	2023
28	α Aquilæ W.	62 36 8	3129	64 3 42	3104	65 31 47	3083	67 0 17	3067
	Jupiter W.	29 3 13	2019	30 56 17	2026	32 49 11	2034	34 41 52	2044
	α Arietis E.	41 58 1	2178	40 9 0	2201	38 20 34	2226	36 32 45	2255
	Aldebaran E.	71 54 21	2074	70 2 41	2085	68 11 18	2097	66 20 15	2111
	Saturn E.	92 32 34	2064	90 40 39	2074	88 48 59	2086	86 57 38	2097
29	α Aquilæ W.	74 26 35	3029	75 56 12	3030	77 25 48	3032	78 55 21	3038
	Jupiter W.	44 1 14	2102	45 52 10	2116	47 42 45	2130	49 32 58	2145
	Fomalhaut W.	42 11 56	2540	43 52 14	2527	45 32 50	2519	47 13 37	2514
	α Arietis E.	27 46 2	2462	26 3 55	2525	24 23 16	2599	22 44 19	2687
	Aldebaran E.	57 10 24	2188	55 21 39	2206	53 33 20	2225	51 45 30	2244
	Saturn E.	77 45 37	2165	75 56 17	2181	74 7 20	2196	72 18 46	2212
	Mars E.	108 7 41	2328	106 22 23	2344	104 37 27	2360	102 52 54	2376
30	α Aquilæ W.	86 20 45	3091	87 49 6	3106	89 17 8	3123	90 44 50	3142
	Jupiter W.	58 38 9	2226	60 25 58	2244	62 13 20	2261	64 [illegible]	[illegible]
	Fomalhaut W.	55 38 9	2523	57 18 50	2530	58 59 21	2538	60 [illegible]	
	Aldebaran E.	42 53 51	2355	41 9 11	2380	39 25 7	2406		
	Saturn E.	63 22 13	2300	61 36 13	2318	59 50 40	2337		
	Mars E.	94 16 13	2464	92 34 9	2482	90 52 30	25[illegible]		
	Sun E.	131 57 11	2582	130 17 51	2600	128 38 56	2[illegible]		
31	Jupiter W.	72 48 28	2370	74 32 46	2387	76 16 39	[illegible]		
	Fomalhaut W.	68 57 34	2609	70 36 17	2624	72 14 39			
	α Pegasi W.	50 20 45	3025	51 50 27	3015	53 20 21			
	Saturn E.	49 27 7	2455	47 44 51	2477	46 3 [illegible]			
	Pollux E.	72 14 45	2402	70 31 13	2421	68 48 [illegible]			
	Mars E.	80 51 54	2617	79 13 22	2636	77 35 1			
	Sun E.	118 54 15	2732	117 18 18	2752	115 42 [illegible]			

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 13h, Mean Time.



This Table represents, at 13h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals, 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shadow, of Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding 0d·418488. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	+1·0724	−1·2000	+9·5995	−0·8534	15 19 21·79	131	212	·580
2	1·0812	1·1940	9·6029	0·8548	15 15 25·88	132	213	·583
3	1·0896	1·1878	9·6063	0·8562	15 11 29·97	133	214	·586
4	+1·0979	−1·1813	+9·6096	−0·8576	15 7 34·06	134	215	·589
5	1·1058	1·1747	9·6129	0·8590	15 3 38·15	135	216	·591
6	1·1135	1·1678	9·6161	0·8604	14 59 42·24	136	217	·594
7	+1·1209	−1·1607	+9·6192	−0·8618	14 55 46·33	137	218	·597
8	1·1281	1·1534	9·6223	0·8632	14 51 50·42	138	219	·600
9	1·1351	1·1457	9·6254	0·8646	14 47 54·51	139	220	·602
10	+1·1418	−1·1379	+9·6283	−0·8659	14 43 58·60	140	221	·605
11	1·1483	1·1297	9·6313	0·8673	14 40 2·69	141	222	·608
12	1·1546	1·1213	9·6342	0·8687	14 36 6·78	142	223	·611
13	+1·1607	−1·1126	+9·6370	−0·8700	14 32 10·87	143	224	·613
14	1·1666	1·1036	9·6399	0·8714	14 28 14·96	144	225	·616
15	1·1722	1·0942	9·6426	0·8727	14 24 19·05	145	226	·619
16	+1·1777	−1·0845	+9·6453	−0·8740	14 20 23·14	146	227	·621
17	1·1830	1·0745	9·6480	0·8753	14 16 27·23	147	228	·624
18	1·1882	1·0641	9·6506	0·8766	14 12 31·32	148	229	·627
19	+1·1931	−1·0533	+9·6532	−0·8779	14 8 35·41	149	230	·630
20	1·1979	1·0421	9·6558	0·8791	14 4 39·50	150	231	·632
21	1·2025	1·0305	9·6583	0·8803	14 0 43·59	151	232	·635
22	+1·2069	−1·0184	+9·6608	−0·8816	13 56 47·69	152	233	·638
23	1·2112	1·0059	9·6632	0·8828	13 52 51·78	153	234	·641
24	1·2153	0·9929	9·6656	0·8839	13 48 55·87	154	235	·643
25	+1·2192	−0·9793	+9·6680	−0·8851	13 44 59·96	155	236	·646
26	1·2230	0·9651	9·6703	0·8862	13 41 4·05	156	237	·649
27	1·2266	0·9504	9·6726	0·8873	13 37 8·14			·652
28	+1·2301	−0·9350	+9·6749	−0·8884	13 33 12·23			654
29	1·2334	0·9188	9·6771	0·8894	13 29 16·3			657
30	1·2366	0·9020	9·6793	0·8905	13 25 20·			60
31	1·2397	0·8843	9·6815	0·8915	13 21 24			63
32	+1·2426	−0·8657	+9·6836	−0·8925	13 17 28			

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be subtracted from Apparent Time.*	Diff. for 1 hour.
		h m s	s	° ′ ″	″	m s	m s	s
Sat.	1	10 40 19·54	9·070	N.8 24 38·0	54·52	1 4·42	0 0·86	0·784
Sun.	2	10 43 57·22	9·059	8 2 49·5	54·85	1 4·38	0 19·68	0·795
Mon.	3	10 47 34·63	9·048	7 40 53·0	55·17	1 4·34	0 38·77	0·806
Tues.	4	10 51 11·79	9·039	7 18 49·0	55·47	1 4·30	0 58·11	0·816
Wed.	5	10 54 48·72	9·030	6 56 37·7	55·76	1 4·26	1 17·68	0·825
Thur.	6	10 58 25·43	9·022	6 34 19·4	56·04	1 4·23	1 37·48	0·833
Frid.	7	11 2 1·93	9·014	6 11 54·6	56·30	1 4·20	1 57·47	0·841
Sat.	8	11 5 38·26	9·007	5 49 23·4	56·55	1 4·17	2 17·65	0·848
Sun.	9	11 9 14·42	9·000	5 26 46·3	56·78	1 4·14	2 37·98	0·854
Mon.	10	11 12 50·42	8·994	5 4 3·6	57·00	1 4·12	2 58·47	0·860
Tues.	11	11 16 26·29	8·989	4 41 15·7	57·20	1 4·10	3 19·10	0·865
Wed.	12	11 20 2·03	8·985	4 18 22·9	57·39	1 4·09	3 39·85	0·869
Thur.	13	11 23 37·67	8·981	3 55 25·5	57·56	1 4·07	4 0·71	0·873
Frid.	14	11 27 13·22	8·978	3 32 24·0	57·72	1 4·06	4 21·66	0·876
Sat.	15	11 30 48·70	8·975	3 9 18·7	57·86	1 4·05	4 42·68	0·878
Sun.	16	11 34 24·11	8·974	2 46 10·0	57·99	1 4·05	5 3·76	0·880
Mon.	17	11 37 59·49	8·974	2 22 58·2	58·11	1 4·05	5 24·87	0·881
Tues.	18	11 41 34·86	8·974	1 59 43·6	58·21	1 4·05	5 46·01	0·881
Wed.	19	11 45 10·22	8·975	1 36 26·6	58·29	1 4·05	6 7·14	0·880
Thur.	20	11 48 45·60	8·976	1 13 7·6	58·36	1 4·06	6 28·25	0·878
Frid.	21	11 52 21·03	8·978	0 49 46·8	58·42	1 4·07	6 49·32	0·875
Sat.	22	11 55 56·52	8·982	0 26 24·7	58·47	1 4·08	7 10·33	0·871
Sun.	23	11 59 32·09	8·987	N.0 3 1·5	58·50	1 4·10	7 31·25	0·867
Mon.	24	12 3 7·78	8·992	S.0 20 22·5	58·52	1 4·12	7 52·06	0·861
Tues.	25	12 6 43·60	8·998	0 43 46·9	58·52	1 4·14	8 12·74	0·855
Wed.	26	12 10 19·58	9·006	1 7 11·4	58·51	1 4·17	8 33·26	0·848
Thur.	27	12 13 55·74	9·015	1 30 35·7	58·49	1 4·20	8 53·60	0·839
Frid.	28	12 17 32·10	9·025	1 53 59·5	58·46	1 4·23	9 13·73	0·829
Sat.	29	12 21 8·70	9·036	2 17 22·5	58·41	1 4·26	9 33·63	0·819
Sun.	30	12 24 45·55	9·047	2 40 44·3	58·35	1 4·30	9 53·28	0·807
Mon.	31	12 28 22·67		S.3 4 4·6		1 4·34	10 12·65	

* *Mean Time of the* Semidiameter passing may be found by subtracting 0ˢ·18 from the *Sidereal* Time.

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	Semidiam.*	Equation of Time, *to be added to Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Sat.	1	10 40 19·54	N. 8 24 38·0	15 53·5	0 0·86	10 40 20·40
Sun.	2	10 43 57·27	8 2 49·2	15 53·8	0 19·68	10 44 16·95
Mon.	3	10 47 34·73	7 40 52·4	15 54·0	0 38·78	10 48 13·51
Tues.	4	10 51 11·94	7 18 48·1	15 54·3	0 58·12	10 52 10·06
Wed.	5	10 54 48·91	6 56 36·5	15 54·5	1 17·70	10 56 6·61
Thur.	6	10 58 25·67	6 34 17·9	15 54·8	1 37·50	11 0 3·17
Frid.	7	11 2 2·23	6 11 52·7	15 55·0	1 57·49	11 3 59·72
Sat.	8	11 5 38·60	5 49 21·2	15 55·2	2 17·68	11 7 56·28
Sun.	9	11 9 14·81	5 26 43·8	15 55·4	2 38·02	11 11 52·83
Mon.	10	11 12 50·87	5 4 0·8	15 55·7	2 58·51	11 15 49·38
Tues.	11	11 16 26·79	4 41 12·5	15 55·9	3 19·15	11 19 45·94
Wed.	12	11 20 2·58	4 18 19·4	15 56·2	3 39·91	11 23 42·49
Thur.	13	11 23 38·27	3 55 21·7	15 56·4	4 0·77	11 27 39·04
Frid.	14	11 27 13·87	3 32 19·8	15 56·7	4 21·73	11 31 35·60
Sat.	15	11 30 49·40	3 9 14·2	15 57·0	4 42·75	11 35 32·15
Sun.	16	11 34 24·87	2 46 5·1	15 57·3	5 3·84	11 39 28·71
Mon.	17	11 38 0·31	2 22 52·9	15 57·5	5 24·95	11 43 25·26
Tues.	18	11 41 35·72	1 59 38·0	15 57·8	5 46·09	11 47 21·81
Wed.	19	11 45 11·14	1 36 20·6	15 58·0	6 7·23	11 51 18·37
Thur.	20	11 48 46·57	1 13 1·3	15 58·3	6 28·35	11 55 14·92
Frid.	21	11 52 22·05	0 49 40·2	15 58·5	6 49·42	11 59 11·47
Sat.	22	11 55 57·59	0 26 17·7	15 58·8	7 10·44	12 2 8·03
Sun.	23	11 59 33·22	N. 0 2 54·1	15 59·1	7 31·36	12
Mon.	24	12 3 8·96	S. 0 20 30·2	15 59·4	7 52·17	1
Tues.	25	12 6 44·83	0 43 54·9	15 59·7	8 12·86	
Wed.	26	12 10 20·86	1 7 19·8	16 0·0	8 33·38	
Thur.	27	12 13 57·07	1 30 44·4	16 0·3	8 53·[illegible]	
Frid.	28	12 17 33·49	1 54 8·5	16 0·5	9 1[illegible]	
Sat.	29	12 21 10·14	2 17 31·8	16 0·8	9 [illegible]	
Sun.	30	12 24 47·04	2 40 53·9	16 1·0	9	
Mon.	31	12 28 24·22	S. 3 4 14·5	16 1·3	10	

* The Semidiameter for *Apparent* Noon may be assumed the same

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax. *Noon.*	THE MOON'S Horizontal Parallax. *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	158 26 42·6	N.0·34	0·0037533	15 53·4	15 45·6	58 12·1	57 43·3
2	159 24 49·8	0·47	0·0036503	15 38·0	15 30·7	57 15·5	56 48·8
3	160 22 59·1	0·60	0·0035463	15 23·8	15 17·5	56 23·7	56 0·4
4	161 21 10·3	0·71	0·0034412	15 11·7	15 6·4	55 39·0	55 19·8
5	162 19 23·5	0·80	0·0033351	15 1·7	14 57·7	55 2·7	54 47·8
6	163 17 38·7	0·87	0·0032279	14 54·2	14 51·3	54 35·1	54 24·3
7	164 15 56·0	0·90	0·0031193	14 48·8	14 47·0	54 15·5	54 8·9
8	165 14 15·3	0·91	0·0030092	14 45·7	14 44·8	54 4·0	54 0·6
9	166 12 36·6	0·89	0·0028977	14 44·3	14 44·3	53 58·9	53 58·8
10	167 10 59·9	0·83	0·0027848	14 44·7	14 45·4	54 0·2	54 3·0
11	168 9 25·0	0·75	0·0026705	14 46·5	14 48·0	54 7·1	54 12·3
12	169 7 52·0	0·65	0·0025548	14 49·7	14 51·7	54 18·7	54 26·4
13	170 6 20·8	0·53	0·0024378	14 54·2	14 57·0	54 35·3	54 45·3
14	171 4 51·3	0·40	0·0023193	15 0·0	15 3·5	54 56·5	55 9·1
15	172 3 23·6	0·26	0·0021996	15 7·3	15 11·4	55 22·9	55 38·1
16	173 1 57·5	0·13	0·0020788	15 15·9	15 20·8	55 54·6	56 12·5
17	174 0 33·2	N.0·01	0·0019571	15 26·0	15 31·6	56 31·7	56 52·3
18	174 59 10·5	S.0·09	0·0018346	15 37·6	15 43·8	57 14·0	57 36·7
19	175 57 49·5	0·17	0·0017115	15 50·2	15 56·8	58 0·3	58 24·4
20	176 56 30·1	0·22	0·0015879	16 3·4	16 9·9	58 48·6	59 12·5
21	177 55 12·3	0·25	0·0014640	16 16·2	16 22·1	59 35·5	59 57·0
22	178 53 56·3	0·25	0·0013398	16 27·4	16 32·0	60 16·5	60 33·3
23	179 52 42·1	0·21	0·0012156	16 35·7	16 38·4	60 46·9	60 56·9
24	180 51 29·8	0·15	0·0010914	16 40·0	16 40·4	61 2·7	61 4·1
25	181 50 19·3	S.0·06	0·0009673	16 39·5	16 37·4	61 0·9	60 53·2
26	182 49 10·8	N.0·05	0·0008436	16 34·1	16 29·7	60 41·1	60 25·0
27	183 48 4·3	0·17	0·0007202	16 24·4	16 18·3	60 5·5	59 43·0
28	184 46 59·9	0·32	0·0005970	16 11·4	16 4·1	59 18·0	58 51·1
29	185 45 57·7	0·45	0·0004740	15 56·5	15 48·8	58 23·2	57 55·0
30	186 44 57·6	0·57	0·0003513	15 41·1	15 33·6	57 26·9	56 59·4
31	187 43 59·8	N.0·69	0·0002287	15 26·4	15 19·6	56 33·0	56 8·3

MEAN TIME.

Day of the Week.	Day of the Month.	THE MOON'S Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Sat.	1	45 53 28·3	52 36 43·9	N.0 56 8·7	N.1 31 6·6	19·7	16 46·8
Sun.	2	59 13 30·0	65 44 11·1	2 4 17·6	2 35 20·3	20·7	17 39·1
Mon.	3	72 9 16·4	78 29 16·4	3 3 57·8	3 29 55·8	21·7	18 32·5
Tues.	4	84 44 43·5	90 56 9·9	3 53 2·8	4 13 9·4	22·7	19 26·0
Wed.	5	97 4 7·3	103 9 6·1	4 30 8·8	4 43 55·6	23·7	20 18·5
Thur.	6	109 11 35·1	115 12 1·2	4 54 25·8	5 1 36·6	24·7	21 8·9
Frid.	7	121 10 49·3	127 8 21·9	5 5 26·9	5 5 57·1	25·7	21 56·6
Sat.	8	133 4 59·2	139 0 59·6	5 3 8·2	4 57 2·9	26·7	22 41·5
Sun.	9	144 56 39·3	150 52 13·0	4 47 45·4	4 35 21·5	27·7	23 23·9
Mon.	10	156 47 54·3	162 43 55·5	4 19 57·9	4 1 43·4	28·7	♂
Tues.	11	168 40 28·8	174 37 45·6	3 40 48·6	3 17 24·6	0·0	0 4·5
Wed.	12	180 35 58·4	186 35 20·2	2 51 44·5	2 24 3·6	1·0	0 44·2
Thur.	13	192 36 5·0	198 38 28·4	1 54 37·6	1 23 43·7	2·0	1 24·0
Frid.	14	204 42 47·6	210 49 22·0	N.0 51 40·2	N.0 18 46·9	3·0	2 4·7
Sat.	15	216 58 32·3	223 10 41·4	S.0 14 35·7	S.0 48 6·1	4·0	2 47·6
Sun.	16	229 26 13·7	235 45 35·0	1 21 21·8	1 53 59·2	5·0	3 33·7
Mon.	17	242 9 11·4	248 37 28·9	2 25 33·9	2 55 40·8	6·0	4 23·9
Tues.	18	255 10 52·7	261 49 46·0	3 23 54·0	3 49 46·3	7·0	5 18·6
Wed.	19	268 34 28·4	275 25 15·2	4 12 51·1	4 32 41·1	8·0	6 17·4
Thur.	20	282 22 15·3	289 25 30·3	4 48 50·2	5 0 53·0	9·0	7 18·5
Frid.	21	296 34 52·7	303 50 4·8	5 8 27·1	5 11 13·3	10·0	8 19·9
Sat.	22	311 10 38·5	318 35 54·4	5 8 57·6	5 1 31·0	11·0	9 19·4
Sun.	23	326 5 1·9	333 37 1·4	4 48 53·5	4 31 11·4	12·0	10 16·0
Mon.	24	341 10 45·2	348 45 0·5	4 8 40·9	3 41 46·0	13·0	11 9·7
Tues.	25	356 18 33·1	3 50 8·6	3 10 58·9	2 36 58·0	14·0	
Wed.	26	11 18 38·0	18 42 58·6	2 0 26·4	1 22 10·1	15·	
Thur.	27	26 2 17·1	33 15 50·2	S.0 42 55·7	S.0 3 28·2	1	
Frid.	28	40 23 6·4	47 23 44·9	N.0 35 30·2	N.1 13 21·6		
Sat.	29	54 17 35·7	61 4 38·4	1 49 32·8	2 23 35·		
Sun.	30	67 45 1·2	74 18 59·7	2 55 6·9	3 23 48		
Mon.	31	80 46 55·0	87 9 13·3	N.3 49 27·1	N.4 11		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 1.				*MONDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	2 52 32·79	N.17 30 19·6	126·38	0	4 40 51·48	N.25 18 28·5	64·80
1	2 54 45·20	17 42 57·9	125·28	1	4 43 9·69	25 24 57·3	63·40
2	2 56 57·72	17 55 29·6	124·17	2	4 45 27·99	25 31 17·7	61·95
3	2 59 10·37	18 7 54·6	123·03	3	4 47 46·36	25 37 29·4	60·53
4	3 1 23·15	18 20 12·8	121·92	4	4 50 4·81	25 43 32·6	59·10
5	3 3 36·04	18 32 24·3	120·77	5	4 52 23·34	25 49 27·2	57·65
6	3 5 49·07	18 44 28·9	119·63	6	4 54 41·93	25 55 13·1	56·23
7	3 8 2·22	18 56 26·7	118·47	7	4 57 0·59	26 0 50·5	54·78
8	3 10 15·50	19 8 17·5	117·30	8	4 59 19·32	26 6 19·2	53·33
9	3 12 28·91	19 20 1·3	116·13	9	5 1 38·11	26 11 39·2	51·88
10	3 14 42·44	19 31 38·1	114·93	10	5 3 56·95	26 16 50·5	50·45
11	3 16 56·11	19 43 7·7	113·75	11	5 6 15·84	26 21 53·2	49·00
12	3 19 9·91	19 54 30·2	112·55	12	5 8 34·78	26 26 47·2	47·55
13	3 21 23·84	20 5 45·5	111·35	13	5 10 53·77	26 31 32·5	46·08
14	3 23 37·90	20 16 53·6	110·12	14	5 13 12·79	26 36 9·0	44·63
15	3 25 52·10	20 27 54·3	108·90	15	5 15 31·86	26 40 36·8	43·17
16	3 28 6·43	20 38 47·7	107·67	16	5 17 50·95	26 44 55·8	41·72
17	3 30 20·89	20 49 33·7	106·43	17	5 20 10·08	26 49 6·1	40·27
18	3 32 35·49	21 0 12·3	105·18	18	5 22 29·23	26 53 7·7	38·78
19	3 34 50·22	21 10 43·4	103·93	19	5 24 48·40	26 57 0·4	37·33
20	3 37 5·08	21 21 7·0	102·67	20	5 27 7·58	27 0 44·4	35·88
21	3 39 20·07	21 31 23·0	101·38	21	5 29 26·77	27 4 19·7	34·40
22	3 41 35·20	21 41 31·3	100·12	22	5 31 45·97	27 7 46·1	32·93
23	3 43 50·45	N.21 51 32·0	98·83	23	5 34 5·18	N.27 11 3·7	31·48
	SUNDAY 2.				*TUESDAY* 4.		
0	3 46 5·84	N.22 1 25·0	97·53	0	5 36 24·38	N.27 14 12·6	30·02
1	3 48 21·36	22 11 10·2	96·25	1	5 38 43·58	27 17 12·7	28·55
2	3 50 37·01	22 20 47·7	94·93	2	5 41 2·76	27 20 4·0	27·07
3	3 52 52·79	22 30 17·3	93·63	3	5 43 21·93	27 22 46·4	25·63
4	3 55 8·70	22 39 39·1	92·30	4	5 45 41·08	27 25 20·2	24·15
5	3 57 24·73	22 48 52·9	90·98	5	5 48 0·21	27 27 45·1	22·70
6	3 59 40·89	22 57 58·8	89·65	6	5 50 19·31	27 30 1·3	21·22
7	4 1 57·17	23 6 56·7	88·32	7	5 52 38·37	27 32 8·6	19·78
8	4 4 13·58	23 15 46·6	86·98	8	5 54 57·39	27 34 7·3	18·30
9	4 6 30·11	23 24 28·5	85·63	9	5 57 16·37	27 35 57·1	16·87
10	4 8 46·77	23 33 2·3	84·27	10	5 59 35·30	27 37 38·3	15·38
11	4 11 3·54	23 41 27·9	82·92	11	6 1 54·18	27 39 10·6	13·95
12	4 13 20·42	23 49 45·4	81·55	12	6 4 13·00	27 40 34·3	12·48
13	4 15 37·42	23 57 54·7	80·18	13	6 6 31·76	27 41 49·2	11·05
14	4 17 54·54	24 5 55·8	78·82	14	6 8 50·45	27 42 55·5	9·58
15	4 20 11·77	24 13 48·7	77·43	15	6 11 9·07	27 43 53·0	8·15
16	4 22 29·11	24 21 33·3	76·03	16	6 13 27·62	27 44 41·9	6·70
17	4 24 46·56	24 29 9·5	74·67	17	6 15 46·08	27 45 22·1	5·25
18	4 27 4·11	24 36 37·5	73·25	18	6 18 4·46	27 45 53·6	3·82
19	4 29 21·76	24 43 57·0	71·87	19	6 20 22·75	27 46 16·5	2·38
20	4 31 39·52	24 51 8·2	70·47	20	6 22 40·94	27 46 30·8	0·95
21	4 33 57·37	24 58 11·0	69·05	21	6 24 59·03	27 46 36·5	0·48
22	4 36 15·31	25 5 5·3	67·63	22	6 27 17·02	27 46 33·6	1·90
23	4 38 33·35	25 11 51	66·23	23	6 29 34·90	27 46 22·2	3·33
24	4 40 51·48	N.25 18 28·5		24	6 31 52·67	N.27 46 2·2	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 5.		
	h m s	° ′ ″	″
0	6 31 52·67	N.27 46 2·2	4·75
1	6 34 10·32	27 45 33·7	6·17
2	6 36 27·84	27 44 56·7	7·58
3	6 38 45·24	27 44 11·2	8·98
4	6 41 2·50	27 43 17·3	10·38
5	6 43 19·63	27 42 15·0	11·80
6	6 45 36·62	27 41 4·2	13·18
7	6 47 53·46	27 39 45·1	14·57
8	6 50 10·15	27 38 17·7	15·97
9	6 52 26·69	27 36 41·9	17·35
10	6 54 43·08	27 34 57·8	18·72
11	6 56 59·30	27 33 5·5	20·08
12	6 59 15·35	27 31 5·0	21·45
13	7 1 31·23	27 28 56·3	22·82
14	7 3 46·94	27 26 39·4	24·18
15	7 6 2·48	27 24 14·3	25·52
16	7 8 17·83	27 21 41·2	26·87
17	7 10 32·99	27 19 0·0	28·22
18	7 12 47·97	27 16 10·7	29·53
19	7 15 2·75	27 13 13·5	30·87
20	7 17 17·33	27 10 8·3	32·18
21	7 19 31·72	27 6 55·2	33·50
22	7 21 45·90	27 3 34·2	34·80
23	7 23 59·88	N.27 0 5·4	36·12
	THURSDAY 6.		
0	7 26 13·64	N.26 56 28·7	37·40
1	7 28 27·19	26 52 44·3	38·70
2	7 30 40·53	26 48 52·1	39·98
3	7 32 53·64	26 44 52·2	41·25
4	7 35 6·53	26 40 44·7	42·52
5	7 37 19·20	26 36 29·6	43·78
6	7 39 31·64	26 32 6·9	45·03
7	7 41 43·84	26 27 36·7	46·28
8	7 43 55·82	26 22 59·0	47·52
9	7 46 7·56	26 18 13·9	48·77
10	7 48 19·06	26 13 21·3	49·98
11	7 50 30·32	26 8 21·4	51·20
12	7 52 41·33	26 3 14·2	52·42
13	7 54 52·10	25 57 59·7	53·62
14	7 57 2·62	25 52 38·0	54·80
15	7 59 12·90	25 47 9·2	56·00
16	8 1 22·92	25 41 33·2	57·18
17	8 3 32·69	25 35 50·1	58·35
18	8 5 42·20	25 30 0·0	59·52
19	8 7 51·46	25 24 2·9	60·67
20	8 10 0·45	25 17 58·9	61·82
21	8 12 9·19	25 11 48·0	62·97
22	8 14 17·66	25 5 30·2	64·08
23	8 16 25·87	24 59 5·7	65·22
24	8 18 33·82	N.24 52 34·4	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 7.		
	h m s	° ′ ″	″
0	8 18 33·82	N.24 52 34·4	66·33
1	8 20 41·50	24 45 56·4	67·43
2	8 22 48·92	24 39 11·8	68·53
3	8 24 56·06	24 32 20·6	69·63
4	8 27 2·94	24 25 22·8	70·72
5	8 29 9·55	24 18 18·5	71·78
6	8 31 15·88	24 11 7·8	72·85
7	8 33 21·95	24 3 50·7	73·92
8	8 35 27·75	23 56 27·2	74·97
9	8 37 33·27	23 48 57·4	76·00
10	8 39 38·53	23 41 21·4	77·03
11	8 41 43·50	23 33 39·2	78·05
12	8 43 48·21	23 25 50·9	79·07
13	8 45 52·64	23 17 56·5	80·08
14	8 47 56·80	23 9 56·0	81·08
15	8 50 0·69	23 1 49·5	82·07
16	8 52 4·30	22 53 37·1	83·05
17	8 54 7·64	22 45 18·8	84·02
18	8 56 10·71	22 36 54·7	84·98
19	8 58 13·50	22 28 24·8	85·93
20	9 0 16·03	22 19 49·2	86·88
21	9 2 18·28	22 11 7·9	87·83
22	9 4 20·26	22 2 20·9	88·75
23	9 6 21·97	N.21 53 28·4	89·68
	SATURDAY 8.		
0	9 8 23·41	N.21 44 30·3	90·58
1	9 10 24·58	21 35 26·8	91·50
2	9 12 25·48	21 26 17·8	92·38
3	9 14 26·12	21 17 3·5	93·28
4	9 16 26·48	21 7 43·8	94·15
5	9 18 26·58	20 58 18·9	95·02
6	9 20 26·42	20 48 48·8	95·88
7	9 22 26·00	20 39 13·5	96·73
8	9 24 25·32	20 29 33·1	97·57
9	9 26 24·37	20 19 47·7	98·42
10	9 28 23·16	20 9 57·2	99·23
11	9 30 21·69	20 0 1·8	100·05
12	9 32 19·97	19 50 1·	
13	9 34 17·99	19 39 5·	
14	9 36 15·76	19 29	
15	9 38 13·28	19	
16	9 40 10·55		
17	9 42 7·57		
18	9 44 4·34		
19	9 46 0·87		
20	9 47 57·15		
21	9 49 53·20		
22	9 51 49·00		
23	9 53 44·5		
24	9 55 39·9		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 9.		
	h m s	° ′ ″	″
0	9 55 39·90	N. 17 43 54·4	109·88
1	9 57 35·00	17 32 55·1	110·58
2	9 59 29·87	17 21 51·6	111·27
3	10 1 24·51	17 10 44·0	111·95
4	10 3 18·92	16 59 32·3	112·62
5	10 5 13·11	16 48 16·6	113·28
6	10 7 7·08	16 36 56·9	113·93
7	10 9 0·83	16 25 33·3	114·58
8	10 10 54·37	16 14 5·8	115·22
9	10 12 47·69	16 2 34·5	115·85
10	10 14 40·80	15 50 59·4	116·48
11	10 16 33·70	15 39 20·5	117·08
12	10 18 26·39	15 27 38·0	117·70
13	10 20 18·88	15 15 51·8	118·28
14	10 22 11·17	15 4 2·1	118·88
15	10 24 3·26	14 52 8·8	119·47
16	10 25 55·15	14 40 12·0	120·03
17	10 27 46·86	14 28 11·8	120·60
18	10 29 38·37	14 16 8·2	121·15
19	10 31 29·69	14 4 1·3	121·70
20	10 33 20·83	13 51 51·1	122·23
21	10 35 11·79	13 39 37·7	122·78
22	10 37 2·57	13 27 21·0	123·28
23	10 38 53·18	N. 13 15 1·3	123·82
	MONDAY 10.		
0	10 40 43·61	N. 13 2 38·4	124·32
1	10 42 33·87	12 50 12·5	124·82
2	10 44 23·97	12 37 43·6	125·32
3	10 46 13·90	12 25 11·7	125·78
4	10 48 3·67	12 12 37·0	126·27
5	10 49 53·29	11 59 59·4	126·73
6	10 51 42·75	11 47 19·0	127·18
7	10 53 32·06	11 34 35·9	127·65
8	10 55 21·22	11 21 50·0	128·08
9	10 57 10·24	11 9 1·5	128·52
10	10 58 59·11	10 56 10·4	128·95
11	11 0 47·85	10 43 16·7	129·37
12	11 2 36·45	10 30 20·5	129·78
13	11 4 24·92	10 17 21·8	130·18
14	11 6 13·27	10 4 20·7	130·57
15	11 8 1·49	9 51 17·3	130·97
16	11 9 49·59	9 38 11·5	131·35
17	11 11 37·57	9 25 3·4	131·72
18	11 13 25·43	9 11 53·1	132·08
19	11 15 13·19	8 58 40·6	132·43
20	11 17 0·83	8 45 26·0	132·80
21	11 18 48·38	8 32 9·2	133·13
22	11 20 35·82	8 18 50·4	133·45
23	11 22 23·16	8 5 29·7	133·80
24	*11 24 10·41*	*N. 7 52 6·9*	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 11.		
	h m s	° ′ ″	″
0	11 24 10·41	N. 7 52 6·9	134·12
1	11 25 57·57	7 38 42·2	134·42
2	11 27 44·64	7 25 15·7	134·72
3	11 29 31·63	7 11 47·4	135·03
4	11 31 18·54	6 58 17·2	135·30
5	11 33 5·37	6 44 45·4	135·58
6	11 34 52·13	6 31 11·9	135·87
7	11 36 38·82	6 17 36·7	136·13
8	11 38 25·45	6 3 59·9	136·38
9	11 40 12·01	5 50 21·6	136·63
10	11 41 58·52	5 36 41·8	136·87
11	11 43 44·97	5 23 0·6	137·12
12	11 45 31·37	5 9 17·9	137·33
13	11 47 17·72	4 55 33·9	137·57
14	11 49 4·04	4 41 48·5	137·77
15	11 50 50·31	4 28 1·9	137·97
16	11 52 36·55	4 14 14·1	138·17
17	11 54 22·75	4 0 25·1	138·37
18	11 56 8·93	3 46 34·9	138·53
19	11 57 55·08	3 32 43·7	138·70
20	11 59 41·21	3 18 51·5	138·88
21	12 1 27·33	3 4 58·2	139·03
22	12 3 13·44	2 51 4·0	139·18
23	12 4 59·53	N. 2 37 8·9	139·32
	WEDNESDAY 12.		
0	12 6 45·62	N. 2 23 13·0	139·45
1	12 8 31·71	2 9 16·3	139·58
2	12 10 17·80	1 55 18·8	139·70
3	12 12 3·90	1 41 20·6	139·80
4	12 13 50·00	1 27 21·8	139·92
5	12 15 36·13	1 13 22·3	140·02
6	12 17 22·27	0 59 22·2	140·08
7	12 19 8·43	0 45 21·7	140·18
8	12 20 54·62	0 31 20·6	140·25
9	12 22 40·84	0 17 19·1	140·32
10	12 24 27·09	N. 0 3 17·2	140·37
11	12 26 13·39	S. 0 10 45·0	140·42
12	12 27 59·72	0 24 47·5	140·47
13	12 29 46·10	0 38 50·3	140·48
14	12 31 32·53	0 52 53·2	140·53
15	12 33 19·01	1 6 56·4	140·53
16	12 35 5·55	1 20 59·6	140·55
17	12 36 52·15	1 35 2·9	140·55
18	12 38 38·82	1 49 6·2	140·53
19	12 40 25·56	2 3 9·4	140·55
20	12 42 12·38	2 17 12·6	140·50
21	12 43 59·27	2 31 15·6	140·48
22	12 45 46·24	2 45 18·5	140·43
23	12 47 33·30	2 59 21·1	140·40
24	12 49 20·45	S. 3 13 23·5	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 13.		
	h m s	° ′ ″	″
0	12 49 20·45	S. 3 13 23·5	140·33
1	12 51 7·70	3 27 25·5	140·28
2	12 52 55·04	3 41 27·2	140·20
3	12 54 42·49	3 55 28·4	140·12
4	12 56 30·05	4 9 29·1	140·05
5	12 58 17·71	4 23 29·4	139·93
6	13 0 5·49	4 37 29·0	139·83
7	13 1 53·39	4 51 28·0	139·73
8	13 3 41·42	5 5 26·4	139·60
9	13 5 29·57	5 19 24·0	139·48
10	13 7 17·85	5 33 20·9	139·33
11	13 9 6·27	5 47 16·9	139·20
12	13 10 54·83	6 1 12·1	139·03
13	13 12 43·53	6 15 6·3	138·88
14	13 14 32·38	6 28 59·6	138·72
15	13 16 21·39	6 42 51·9	138·52
16	13 18 10·55	6 56 43·0	138·33
17	13 19 59·87	7 10 33·0	138·15
18	13 21 49·35	7 24 21·9	137·93
19	13 23 39·01	7 38 9·5	137·72
20	13 25 28·84	7 51 55·8	137·50
21	13 27 18·85	8 5 40·8	137·27
22	13 29 9·04	8 19 24·4	137·02
23	13 30 59·42	S. 8 33 6·5	136·77
	FRIDAY 14.		
0	13 32 49·99	S. 8 46 47·1	136·52
1	13 34 40·75	9 0 26·2	136·23
2	13 36 31·71	9 14 3·6	135·97
3	13 38 22·88	9 27 39·4	135·67
4	13 40 14·26	9 41 13·4	135·39
5	13 42 5·84	9 54 45·7	135·07
6	13 43 57·64	10 8 16·1	134·77
7	13 45 49·66	10 21 44·7	134·42
8	13 47 41·91	10 35 11·2	134·10
9	13 49 34·38	10 48 35·8	133·75
10	13 51 27·08	11 1 58·3	133·40
11	13 53 20·03	11 15 18·7	133·03
12	13 55 13·21	11 28 36·9	132·67
13	13 57 6·64	11 41 52·9	132·27
14	13 59 0·32	11 55 6·5	131·88
15	14 0 54·25	12 8 17·8	131·48
16	14 2 48·44	12 21 26·7	131·07
17	14 4 42·89	12 34 33·1	130·63
18	14 6 37·60	12 47 36·9	130·22
19	14 8 32·59	13 0 38·2	129·77
20	14 10 27·85	13 13 36·8	129·32
21	14 12 23·39	13 26 32·7	128·83
22	14 14 19·21	13 39 25·7	128·38
23	14 16 15·32	13 52 16·0	127·88
24	14 18 11·71	S. 14 5 3·3	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 15.		
	h m s	° ′ ″	″
0	14 18 11·71	S. 14 5 3·3	127·40
1	14 20 8·40	14 17 47·7	126·88
2	14 22 5·39	14 30 29·0	126·37
3	14 24 2·68	14 43 7·2	125·83
4	14 26 0·28	14 55 42·2	125·30
5	14 27 58·19	15 8 14·0	124·75
6	14 29 56·40	15 20 42·5	124·20
7	14 31 54·94	15 33 7·7	123·62
8	14 33 53·80	15 45 29·4	123·03
9	14 35 52·98	15 57 47·6	122·43
10	14 37 52·49	16 10 2·2	121·83
11	14 39 52·33	16 22 13·2	121·22
12	14 41 52·51	16 34 20·5	120·58
13	14 43 53·03	16 46 24·0	119·95
14	14 45 53·89	16 58 23·7	119·28
15	14 47 55·10	17 10 19·4	118·63
16	14 49 56·66	17 22 11·2	117·95
17	14 51 58·57	17 33 58·9	117·27
18	14 54 0·84	17 45 42·5	116·55
19	14 56 3·47	17 57 21·8	115·85
20	14 58 6·47	18 8 56·9	115·13
21	15 0 9·83	18 20 27·7	114·38
22	15 2 13·56	18 31 54·0	113·63
23	15 4 17·67	S. 18 43 15·8	112·88
	SUNDAY 16.		
0	15 6 22·15	S. 18 54 33·1	112·10
1	15 8 27·01	19 5 45·7	111·32
2	15 10 32·26	19 16 53·6	110·52
3	15 12 37·89	19 27 56·7	109·70
4	15 14 43·91	19 38 54·9	108·88
5	15 16 50·32	19 49 48·2	108·05
6	15 18 57·13	20 0 36·5	107·18
7	15 21 4·33	20 11 19·6	106·33
8	15 23 11·93	20 21 57·6	105·45
9	15 25 19·93	20 32 30·3	104·55
10	15 27 28·33	20 42 57·6	103·65
11	15 29 37·14	20 53 19·5	102·75
12	15 31 46·36	21 3 36·0	101·82
13	15 33 55·98	21 13 46·9	100·87
14	15 36 6·02	21 23 52·1	99·90
15	15 38 16·48	21 33 51·5	
16	15 40 27·35	21 43 45·	
17	15 42 38·63	21 53 3·	
18	15 44 50·34	22	
19	15 47 2·46	22	
20	15 49 15·01	22	
21	15 51 27·98	22	
22	15 53 41·37		
23	15 55 55·19		
24	15 58 9·43	S.	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 17.				*WEDNESDAY* 19.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	15 58 9·43	S. 22 59 14·7	89·58	0	17 53 34·76	S. 27 39 59·9	20·87
1	16 0 24·10	23 8 12·2	88·47	1	17 56 7·83	27 42 5·1	19·13
2	16 2 39·20	23 17 3·0	87·35	2	17 58 41·18	27 43 59·9	17·40
3	16 4 54·72	23 25 47·1	86·22	3	18 1 14·79	27 45 44·3	15·63
4	16 7 10·68	23 34 24·4	85·07	4	18 3 48·66	27 47 18·1	13·87
5	16 9 27·06	23 42 54·8	83·90	5	18 6 22·77	27 48 41·3	12·12
6	16 11 43·87	23 51 18·2	82·72	6	18 8 57·13	27 49 54·0	10·33
7	16 14 1·11	23 59 34·5	81·52	7	18 11 31·73	27 50 56·0	8·53
8	16 16 18·77	24 7 43·6	80·32	8	18 14 6·55	27 51 47·2	6·75
9	16 18 36·87	24 15 45·5	79·08	9	18 16 41·60	27 52 27·7	4·95
10	16 20 55·39	24 23 40·0	77·87	10	18 19 16·85	27 52 57·4	3·13
11	16 23 14·34	24 31 27·2	76·60	11	18 21 52·31	27 53 16·2	1·32
12	16 25 33·71	24 39 6·8	75·35	12	18 24 27·96	27 53 24·1	0·50
13	16 27 53·51	24 46 38·9	74·07	13	18 27 3·80	27 53 21·1	2·33
14	16 30 13·73	24 54 3·3	72·77	14	18 29 39·82	27 53 7·1	4·17
15	16 32 34·37	25 1 19·9	71·47	15	18 32 16·00	27 52 42·1	6·02
16	16 34 55·44	25 8 28·7	70·15	16	18 34 52·35	27 52 6·0	7·85
17	16 37 16·92	25 15 29·6	68·80	17	18 37 28·85	27 51 18·9	9·72
18	16 39 38·83	25 22 22·4	67·45	18	18 40 5·49	27 50 20·6	11·57
19	16 42 1·15	25 29 7·1	66·10	19	18 42 42·27	27 49 11·2	13·43
20	16 44 23·88	25 35 43·7	64·72	20	18 45 19·17	27 47 50·6	15·28
21	16 46 47·03	25 42 12·0	63·33	21	18 47 56·19	27 46 18·9	17·17
22	16 49 10·58	25 48 32·0	61·92	22	18 50 33·32	27 44 35·9	19·03
23	16 51 34·54	S. 25 54 43·5	60·50	23	18 53 10·55	S. 27 42 41·7	20·92
	TUESDAY 18.				*THURSDAY* 20.		
0	16 53 58·91	S. 26 0 46·5	59·07	0	18 55 47·87	S. 27 40 36·2	22·78
1	16 56 23·68	26 6 40·9	57·62	1	18 58 25·27	27 38 19·5	24·68
2	16 58 48·85	26 12 26·6	56·17	2	19 1 2·74	27 35 51·4	26·55
3	17 1 14·41	26 18 3·6	54·68	3	19 3 40·28	27 33 12·1	28·45
4	17 3 40·36	26 23 31·7	53·20	4	19 6 17·87	27 30 21·4	30·32
5	17 6 6·70	26 28 50·9	51·70	5	19 8 55·51	27 27 19·5	32·22
6	17 8 33·43	26 34 1·1	50·18	6	19 11 33·18	27 24 6·2	34·10
7	17 11 0·53	26 39 2·2	48·67	7	19 14 10·88	27 20 41·6	35·98
8	17 13 28·01	26 43 54·2	47·12	8	19 16 48·60	27 17 5·7	37·87
9	17 15 55·86	26 48 36·9	45·57	9	19 19 26·33	27 13 18·5	39·77
10	17 18 24·08	26 53 10·3	44·00	10	19 22 4·05	27 9 19·9	41·63
11	17 20 52·66	26 57 34·3	42·43	11	19 24 41·77	27 5 10·1	43·53
12	17 23 21·60	27 1 48·9	40·85	12	19 27 19·48	27 0 48·9	45·42
13	17 25 50·89	27 5 54·0	39·23	13	19 29 57·16	26 56 16·4	47·28
14	17 28 20·53	27 9 49·4	37·62	14	19 32 34·80	26 51 32·7	49·17
15	17 30 50·51	27 13 35·1	36·00	15	19 35 12·40	26 46 37·7	51·05
16	17 33 20·83	27 17 11·1	34·37	16	19 37 49·95	26 41 31·4	52·92
17	17 35 51·48	27 20 37·3	32·72	17	19 40 27·44	26 36 13·9	54·77
18	17 38 22·45	27 23 53·6	31·05	18	19 43 4·86	26 30 45·3	56·65
19	17 40 53·74	27 26 59·9	29·38	19	19 45 42·21	26 25 5·4	58·50
20	17 43 25·34	27 29 56·2	27·70	20	19 48 19·47	26 19 14·4	60·37
21	17 45 57·25	27 32 42·4	26·02	21	19 50 56·64	26 13 12·2	62·20
22	17 48 29·46	27 35 18·5	24·30	22	19 53 33·72	26 6 59·0	64·05
23	17 51 1·97	27 37 44·3	22·60	23	19 56 10·68	26 0 34·7	65·88
24	17 53 34·76	S. 27 39 59·9		24	19 58 47·53	S. 25 53 59·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 21.		
	h m s	° ′ ″	″
0	19 58 47·53	S. 25 53 59·4	67·72
1	20 1 24·25	25 47 13·1	69·55
2	20 4 0·84	25 40 15·8	71·35
3	20 6 37·30	25 33 7·7	73·17
4	20 9 13·61	25 25 48·7	74·98
5	20 11 49·77	25 18 18·8	76·77
6	20 14 25·77	25 10 38·2	78·55
7	20 17 1·60	25 2 46·9	80·32
8	20 19 37·27	24 54 45·0	82·10
9	20 22 12·76	24 46 32·4	83·85
10	20 24 48·06	24 38 9·3	85·62
11	20 27 23·17	24 29 35·6	87·33
12	20 29 58·09	24 20 51·6	89·07
13	20 32 32·81	24 11 57·2	90·78
14	20 35 7·32	24 2 52·5	92·50
15	20 37 41·61	23 53 37·5	94·18
16	20 40 15·69	23 44 12·4	95·87
17	20 42 49·54	23 34 37·2	97·53
18	20 45 23·17	23 24 52·0	99·22
19	20 47 56·57	23 14 56·7	100·83
20	20 50 29·74	23 4 51·7	102·48
21	20 53 2·66	22 54 36·8	104·12
22	20 55 35·33	22 44 12·1	105·70
23	20 58 7·76	S. 22 33 37·9	107·32
	SATURDAY 22.		
0	21 0 39·94	S. 22 22 54·0	108·90
1	21 3 11·86	22 12 0·6	110·45
2	21 5 43·52	22 0 57·9	112·02
3	21 8 14·91	21 49 45·8	113·55
4	21 10 46·04	21 38 24·5	115·07
5	21 13 16·90	21 26 54·1	116·57
6	21 15 47·49	21 15 14·7	118·07
7	21 18 17·81	21 3 26·3	119·53
8	21 20 47·86	20 51 29·1	121·00
9	21 23 17·62	20 39 23·1	122·45
10	21 25 47·11	20 27 8·4	123·87
11	21 28 16·32	20 14 45·2	125·28
12	21 30 45·24	20 2 13·5	126·67
13	21 33 13·88	19 49 33·5	128·05
14	21 35 42·23	19 36 45·2	129·40
15	21 38 10·30	19 23 48·8	130·73
16	21 40 38·08	19 10 44·4	132·07
17	21 43 5·57	18 57 32·0	133·38
18	21 45 32·77	18 44 11·7	134·67
19	21 47 59·68	18 30 43·7	135·93
20	21 50 26·31	18 17 8·1	137·18
21	21 52 52·65	18 3 25·0	138·43
22	21 55 18·69	17 49 34·4	139·65
23	21 57 44·45	17 35 36·5	140·83
24	22 0 9·92	S. 17 21 31·5	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 23.		
	h m s	° ′ ″	″
0	22 0 9·92	S. 17 21 31·5	142·02
1	22 2 35·10	17 7 19·4	143·20
2	22 5 0·00	16 53 0·2	144·32
3	22 7 24·61	16 38 34·3	145·45
4	22 9 48·93	16 24 1·6	146·55
5	22 12 12·97	16 9 22·3	147·65
6	22 14 36·72	15 54 36·4	148·70
7	22 17 0·20	15 39 44·2	149·75
8	22 19 23·39	15 24 45·7	150·77
9	22 21 46·31	15 9 41·1	151·78
10	22 24 8·95	14 54 30·4	152·77
11	22 26 31·31	14 39 13·8	153·73
12	22 28 53·40	14 23 51·4	154·68
13	22 31 15·22	14 8 23·3	155·60
14	22 33 36·77	13 52 49·7	156·50
15	22 35 58·06	13 37 10·7	157·40
16	22 38 19·08	13 21 26·3	158·25
17	22 40 39·85	13 5 36·8	159·10
18	22 43 0·35	12 49 42·2	159·93
19	22 45 20·60	12 33 42·6	160·73
20	22 47 40·59	12 17 38·2	161·52
21	22 50 0·33	12 1 29·1	162·27
22	22 52 19·83	11 45 15·5	163·03
23	22 54 39·08	S. 11 28 57·3	163·73
	MONDAY 24.		
0	22 56 58·09	S. 11 12 34·9	164·45
1	22 59 16·86	10 56 8·2	165·12
2	23 1 35·40	10 39 37·5	165·78
3	23 3 53·71	10 23 2·8	166·42
4	23 6 11·79	10 6 24·3	167·05
5	23 8 29·65	9 49 42·0	167·63
6	23 10 47·29	9 32 56·2	168·22
7	23 13 4·71	9 16 6·9	168·78
8	23 15 21·92	8 59 14·2	169·30
9	23 17 38·92	8 42 18·4	169·83
10	23 19 55·71	8 25 19·4	170·32
11	23 22 12·30	8 8 17·5	170·78
12	23 24 28·70	7 51 12·8	171·25
13	23 26 44·91	7 34 5·[illegible]	
14	23 29 0·92	7 16 55	
15	23 31 16·75	6 59 4[illegible]	
16	23 33 32·40	6 42	
17	23 35 47·88	6 2[illegible]	
18	23 38 3·18	6 [illegible]	
19	23 40 18·31	5 [illegible]	
20	23 42 33·28	5	
21	23 44 48·09	5	
22	23 47 2·75	4	
23	23 49 17·25	4	
24	23 51 31·61	S. 4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 25.		
	h m s	° ′ ″	″
0	23 51 31·61	S. 4 23 19·6	175·07
1	23 53 45·82	4 5 49·2	175·23
2	23 55 59·90	3 48 17·8	175·42
3	23 58 13·85	3 30 45·3	175·55
4	0 0 27·67	3 13 12·0	175·67
5	0 2 41·36	2 55 38·0	175·78
6	0 4 54·93	2 38 3·3	175·87
7	0 7 8·39	2 20 28·1	175·92
8	0 9 21·74	2 2 52·6	175·97
9	0 11 34·98	1 45 16·8	176·00
10	0 13 48·13	1 27 40·8	175·98
11	0 16 1·17	1 10 4·9	175·98
12	0 18 14·12	0 52 29·0	175·95
13	0 20 26·99	0 34 53·3	175·88
14	0 22 39·77	S. 0 17 18·0	175·80
15	0 24 52·48	N. 0 0 16·8	175·72
16	0 27 5·11	0 17 51·1	175·62
17	0 29 17·67	0 35 24·8	175·47
18	0 31 30·17	0 52 57·6	175·32
19	0 33 42·61	1 10 29·5	175·13
20	0 35 54·99	1 28 0·3	174·95
21	0 38 7·32	1 45 30·0	174·75
22	0 40 19·61	2 2 58·5	174·50
23	0 42 31·85	N. 2 20 25·5	174·27
	WEDNESDAY 26.		
0	0 44 44·06	N. 2 37 51·1	174·00
1	0 46 56·23	2 55 15·1	173·70
2	0 49 8·38	3 12 37·3	173·42
3	0 51 20·50	3 29 57·8	173·08
4	0 53 32·60	3 47 16·3	172·73
5	0 55 44·68	4 4 32·7	172·38
6	0 57 56·75	4 21 47·0	172·00
7	1 0 8·82	4 38 59·0	171·60
8	1 2 20·89	4 56 8·6	171·20
9	1 4 32·95	5 13 15·8	170·75
10	1 6 45·02	5 30 20·3	170·30
11	1 8 57·10	5 47 22·1	169·85
12	1 11 9·20	6 4 21·2	169·35
13	1 13 21·31	6 21 17·3	168·85
14	1 15 33·45	6 38 10·4	168·33
15	1 17 45·62	6 55 0·4	167·80
16	1 19 57·81	7 11 47·2	167·23
17	1 22 10·04	7 28 30·6	166·67
18	1 24 22·31	7 45 10·6	166·07
19	1 26 34·62	8 1 47·0	165·47
20	1 28 46·98	8 18 19·8	164·85
21	1 30 59·38	8 34 48·9	164·22
22	1 33 11·84	8 51 14·2	163·55
23	1 35 24·36	9 7 35·5	162·88
24	1 37 36·94	N. 9 23 52·8	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 27.		
	h m s	° ′ ″	″
0	1 37 36·94	N. 9 23 52·8	162·20
1	1 39 49·58	9 40 6·0	161·48
2	1 42 2·29	9 56 14·9	160·77
3	1 44 15·07	10 12 19·5	160·03
4	1 46 27·92	10 28 19·7	159·28
5	1 48 40·86	10 44 15·4	158·52
6	1 50 53·87	11 0 6·5	157·72
7	1 53 6·97	11 15 52·8	156·93
8	1 55 20·16	11 31 34·4	156·12
9	1 57 33·43	11 47 11·1	155·30
10	1 59 46·80	12 2 42·9	154·45
11	2 2 0·27	12 18 9·6	153·58
12	2 4 13·84	12 33 31·1	152·72
13	2 6 27·51	12 48 47·4	151·82
14	2 8 41·28	13 3 58·3	150·93
15	2 10 55·17	13 19 3·9	150·00
16	2 13 9·16	13 34 3·9	149·08
17	2 15 23·27	13 48 58·4	148·13
18	2 17 37·49	14 3 47·2	147·17
19	2 19 51·83	14 18 30·2	146·20
20	2 22 6·28	14 33 7·4	145·22
21	2 24 20·86	14 47 38·7	144·22
22	2 26 35·56	15 2 4·0	143·20
23	2 28 50·39	N.15 16 23·2	142·17
	FRIDAY 28.		
0	2 31 5·35	N.15 30 36·2	141·13
1	2 33 20·44	15 44 43·0	140·08
2	2 35 35·65	15 58 43·5	139·02
3	2 37 51·00	16 12 37·6	137·93
4	2 40 6·49	16 26 25·2	136·83
5	2 42 22·11	16 40 6·2	135·75
6	2 44 37·87	16 53 40·7	134·62
7	2 46 53·77	17 7 8·4	133·50
8	2 49 9·81	17 20 29·4	132·37
9	2 51 25·98	17 33 43·6	131·20
10	2 53 42·30	17 46 50·8	130·05
11	2 55 58·76	17 59 51·1	128·87
12	2 58 15·37	18 12 44·3	127·68
13	3 0 32·12	18 25 30·4	126·48
14	3 2 49·02	18 38 9·3	125·28
15	3 5 6·06	18 50 41·0	124·05
16	3 7 23·24	19 3 5·3	122·83
17	3 9 40·57	19 15 22·3	121·60
18	3 11 58·05	19 27 31·9	120·33
19	3 14 15·68	19 39 33·9	119·07
20	3 16 33·45	19 51 28·3	117·82
21	3 18 51·37	20 3 15·2	116·52
22	3 21 9·43	20 14 54·3	115·23
23	3 23 27·64	20 26 25·7	113·93
24	3 25 45·99	N.20 37 49·3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 29.				*SUNDAY* 30.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	3 25 45·99	N.20 37 49·3	112·62	0	4 21 46·73	N.24 30 2·1	78·78
1	3 28 4·49	20 49 5·0	111·30	1	4 24 8·23	24 37 54·8	77·30
2	3 30 23·13	21 0 12·8	109·98	2	4 26 29·82	24 45 38·6	75·80
3	3 32 41·92	21 11 12·7	108·63	3	4 28 51·50	24 53 13·4	74·30
4	3 35 0·84	21 22 4·5	107·28	4	4 31 13·27	25 0 39·2	72·80
5	3 37 19·91	21 32 48·2	105·93	5	4 33 35·12	25 7 56·0	71·30
6	3 39 39·11	21 43 23·8	104·58	6	4 35 57·05	25 15 3·8	69·78
7	3 41 58·46	21 53 51·3	103·20	7	4 38 19·06	25 22 2·5	68·27
8	3 44 17·94	22 4 10·5	101·82	8	4 40 41·14	25 28 52·1	66·75
9	3 46 37·55	22 14 21·4	100·43	9	4 43 3·29	25 35 32·6	65·22
10	3 48 57·30	22 24 24·0	99·03	10	4 45 25·50	25 42 3·9	63·70
11	3 51 17·19	22 34 18·2	97·63	11	4 47 47·78	25 48 26·1	62·18
12	3 53 37·20	22 44 4·0	96·23	12	4 50 10·11	25 54 39·2	60·65
13	3 55 57·34	22 53 41·4	94·80	13	4 52 32·49	26 0 43·1	59·12
14	3 58 17·61	23 3 10·2	93·38	14	4 54 54·92	26 6 37·8	57·57
15	4 0 38·01	23 12 30·5	91·95	15	4 57 17·40	26 12 23·2	56·05
16	4 2 58·52	23 21 42·2	90·52	16	4 59 39·91	26 17 59·5	54·50
17	4 5 19·16	23 30 45·3	89·07	17	5 2 2·46	26 23 26·5	52·95
18	4 7 39·91	23 39 39·7	87·62	18	5 4 25·03	26 28 44·2	51·42
19	4 10 0·78	23 48 25·4	86·17	19	5 6 47·64	26 33 52·7	49·87
20	4 12 21·76	23 57 2·4	84·70	20	5 9 10·26	26 38 51·9	48·32
21	4 14 42·84	24 5 30·6	83·22	21	5 11 32·89	26 43 41·8	46·77
22	4 17 4·04	24 13 49·9	81·77	22	5 13 55·54	26 48 22·4	45·23
23	4 19 25·33	24 22 0·5	80·27	23	5 16 18·20	26 52 53·8	43·67
24	4 21 46·73	N.24 30 2·1		24	5 18 40·85	N.26 57 15·8	

PHASES OF THE MOON.

		d	h	m
☾	*Last Quarter*	2	20	23·9
●	New Moon	10	22	51·7
☽	*First Quarter*	18	19	0·9
○	Full Moon	25	9	25·5

☾	Apogee	
☾	Perigee	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Jupiter W.	79 43 4	2443	81 25 38	2462	83 7 45	2479	84 49 27	2497
	Fomalhaut W.	75 30 24	2669	77 7 45	2685	78 44 45	2701	80 21 24	2718
	α Pegasi W.	56 20 34	3000	57 50 47	3000	59 21 0	3000	60 51 13	3003
	Saturn E.	42 40 59	2540	41 0 41	2561	39 20 52	2582	37 41 33	2604
	Pollux E.	65 23 18	2477	63 41 33	2495	62 0 13	2514	60 19 20	2532
	Mars E.	74 20 25	2695	72 43 38	2715	71 7 18	2735	69 31 24	2754
	Sun E.	112 33 3	2811	110 58 50	2831	109 25 2	2850	107 51 39	2870
2	Jupiter W.	93 11 40	2587	94 50 53	2604	96 29 43	2621	98 8 9	2637
	Fomalhaut W.	88 19 3	2803	89 53 27	2820	91 27 29	2837	93 1 9	2855
	α Pegasi W.	68 20 54	3034	69 50 25	3042	71 19 46	3051	72 48 55	3061
	α Arietis W.	24 43 17	2997	26 13 33	2973	27 44 19	2956	29 15 27	2943
	Saturn E.	29 32 44	2724	27 56 36	2751	26 21 4	2779	24 46 9	2809
	Pollux E.	52 1 10	2623	50 22 46	2640	48 44 46	2657	47 7 8	2675
	Mars E.	61 38 15	2849	60 4 51	2868	58 31 51	2887	56 59 15	2905
	Sun E.	100 10 56	2965	98 39 59	2984	97 9 26	3002	95 39 16	3020
3	Jupiter W.	106 14 49	2717	107 51 6	2733	109 27 2	2747	111 2 39	2762
	α Pegasi W.	80 11 28	3117	81 39 17	3129	83 6 51	3142	84 34 10	3154
	α Arietis W.	36 53 33	2930	38 25 14	2932	39 56 52	2936	41 28 25	2941
	Pollux E.	39 4 36	2756	37 29 10	2771	35 54 4	2785	34 19 17	2801
	Mars E.	49 21 55	2992	47 51 32	3009	46 21 30	3026	44 51 49	3041
	Sun E.	88 13 52	3106	86 45 50	3122	85 18 7	3138	83 50 44	3153
4	α Pegasi W.	91 46 59	3219	93 12 46	3231	94 38 18	3245	96 3 34	3259
	α Arietis W.	49 4 20	2974	50 35 6	2981	52 5 43	2989	53 36 10	2996
	Aldebaran W.	19 22 3	3273	20 46 46	3231	22 12 19	3198	23 38 31	3173
	Mars E.	37 28 16	3119	36 0 30	3135	34 33 3	3149	33 5 53	3165
	Sun E.	76 38 20	3226	75 12 42	3239	73 47 19	3253	72 22 12	3265
5	α Arietis W.	61 6 8	3032	62 35 41	3039	64 5 5	3046	65 34 21	3052
	Aldebaran W.	30 54 55	3115	32 22 47	3111	33 50 43	3108	35 18 43	3107
	Mars E.	25 54 36	3241	24 29 15	3258	23 4 15	3276	21 39 36	3295
	Sun E.	65 20 9	3323	63 56 24	3332	62 32 50	3343	61 9 28	3352
6	α Arietis W.	72 58 44	3082	74 27 16	3087	75 55 41	3092	77 24 0	3097
	Aldebaran W.	42 38 55	3107	44 6 56	3109	45 34 55	3110	47 2 52	3111
	Saturn W.	21 12 52	3172	22 39 35	3163	24 6 29	3155	25 33 32	3149
	Sun E.	54 15 10	3394	52 52 47	3401	51 30 32	3408	50 8 24	3415
7	α Arietis W.	84 44 14	3118	86 12 2	3120	87 39 47	3124	89 7 27	3126
	Aldebaran W.	54 22 11	3119	55 49 58	3121	57 17 42	3121	58 45 26	3123
	Saturn W.	32 50 1	3137	34 17 26	3135	35 44 53	3135	37 12 20	3135
	Sun E.	43 19 35	3444	41 58 8	3448	40 36 46	3454	39 15 30	3459
13	Sun W.	22 34 21	3401	23 56 37	3388	25 19 7	3376	26 41 51	3365
	Antares E.	55 28 29	2979	53 57 50	2974	52 27 4	2968	50 56 11	2962
	α Aquilæ E.	103 55 0	3872	102 41 12	3855	101 27 6	3840	100 12 45	3825
14	Sun W.	33 38 31	3314	35 2 26	3325	36 26 32	3294	37 50 50	3285
	Antares E.	43 19 50	2929	41 48 8	2923	40 16 18	2916	38 44 19	2909
	α Aquilæ E.	93 57 35	3766	92 41 58	3757	91 26 11	3749	90 10 16	3742
15	Sun W.	44 55 11	3235	46 20 39	3225	47 46 19	3214	49 12 12	3203

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Jupiter W.	86 30 44	2516	88 11 35	2534	89 52 1	2552	91 32 2	2569
	Fomalhaut W.	81 57 40	2734	83 33 34	2751	85 9 6	2768	86 44 16	2785
	α Pegasi W.	62 21 22	3007	63 51 26	3013	65 21 23	3018	66 51 13	3026
	Saturn E.	36 2 44	2628	34 24 27	2651	32 46 41	2674	31 9 26	2699
	Pollux E.	58 38 52	2551	56 58 49	2569	55 19 12	2587	53 39 59	2604
	Mars E.	67 55 56	2773	66 20 53	2792	64 46 15	2812	63 12 3	2831
	Sun E.	106 18 41	2889	104 46 8	2909	103 14 0	2928	101 42 16	2946
2	Jupiter W.	99 46 13	2654	101 23 55	2671	103 1 14	2687	104 38 12	2702
	Fomalhaut W.	94 34 26	2872	96 7 21	2889	97 39 54	2907	99 12 4	2924
	α Pegasi W.	74 17 52	3072	75 46 36	3083	77 15 7	3094	78 43 24	3105
	α Arietis W.	30 46 51	2935	32 18 26	2931	33 50 6	2928	35 21 49	2928
	Saturn E.	23 11 53	2841	21 38 19	2878	20 5 32	2920	18 33 38	2967
	Pollux E.	45 29 54	2691	43 53 2	2707	42 16 32	2723	40 40 23	2740
	Mars E.	55 27 2	2923	53 55 12	2940	52 23 44	2958	50 52 39	2975
	Sun E.	94 9 28	3038	92 40 2	3056	91 10 58	3072	89 42 14	3090
3	Jupiter W.	112 37 57	2776	114 12 56	2790	115 47 37	2804	117 22 0	2817
	α Pegasi W.	86 1 14	3166	87 28 4	3179	88 54 38	3193	90 20 56	3205
	α Arietis W.	42 59 52	2947	44 31 11	2953	46 2 23	2960	47 33 26	2967
	Pollux E.	32 44 50	2816	31 10 43	2829	29 36 53	2844	28 3 22	2858
	Mars E.	43 22 27	3058	41 53 26	3074	40 24 44	3089	38 56 21	3104
	Sun E.	82 23 39	3169	80 56 53	3184	79 30 25	3199	78 4 14	3213
4	α Pegasi W.	97 28 33	3272	98 53 17	3286	100 17 45	3300	101 41 56	3314
	α Arietis W.	55 6 28	3004	56 36 36	3010	58 6 36	3018	59 36 26	3025
	Aldebaran W.	25 5 12	3154	26 32 16	3140	27 59 37	3129	29 27 11	3121
	Mars E.	31 39 2	3179	30 12 28	3194	28 46 12	3210	27 20 15	3225
	Sun E.	70 57 20	3277	69 32 42	3289	68 8 18	3300	66 44 7	3312
5	α Arietis W.	67 3 29	3059	68 32 29	3065	70 1 21	3071	71 30 6	3077
	Aldebaran W.	36 46 44	3105	38 14 47	3105	39 42 50	3105	41 10 53	3106
	Mars E.	20 15 19	3316	18 51 26	3340	17 28 1	3367	16 5 7	3400
	Sun E.	59 46 16	3361	58 23 15	3370	57 0 24	3378	55 37 43	3386
6	α Arietis W.	78 52 13	3101	80 20 21	3106	81 48 23	3110	83 16 21	3114
	Aldebaran W.	48 30 48	3114	49 58 41	3115	51 26 33	3116	52 54 23	3118
	Saturn W.	27 0 42	3145	28 27 57	3142	29 55 16	3139	31 22 38	3138
	Sun E.	48 46 25	3421	47 24 32	3428	46 2 47	3433	44 41 8	3439
7	α Arietis W.	90 35 5	3130	92 2 38	3132	93 30 9	3134	94 57 37	3137
	Aldebaran W.	60 13 8	3124	61 40 48	3124	63 8 28	3125	64 [illegible]	3126
	Saturn W.	38 39 47	3134	40 7 16	3134	41 34 44	3133	[illegible]	133
	Sun E.	37 54 20	3463	36 33 14	3467	35 12 13	3471		75
13	Sun W.	28 4 47	3354	29 27 56	3344	30 51 16	[illegible]		25
	Antares E.	49 25 11	2956	47 54 3	2949	46 22 46			137
	α Aquilæ E.	98 58 9	3812	97 43 19	3799	96 28 1			7
14	Sun W.	39 15 19	3276	40 39 59	3265	42 4			
	Antares E.	37 12 11	2901	35 39 54	2893	34 7			
	α Aquilæ E.	88 54 13	3734	87 38 2	3728	86 2			
15	Sun W.	50 38 18	3192	52 4 37	3181	53 3			

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
15	Venus W.	23 20 21	3163	24 47 14	3113	26 15 8	3067	27 43 58	3027
	Antares E.	31 2 2	2870	29 29 4	2862	27 55 56	2853	26 22 37	2845
	α Aquilæ E.	83 48 55	3716	82 32 25	3712	81 15 51	3710	79 59 15	3710
	Jupiter E.	107 36 2	2836	106 2 21	2827	104 28 28	2818	102 54 24	2809
16	Sun W.	56 24 55	3146	57 52 9	3134	59 19 37	3121	60 47 21	3109
	Venus W.	35 19 3	2876	36 51 53	2852	38 25 14	2829	39 59 4	2807
	α Aquilæ E.	73 36 27	3722	72 20 3	3728	71 3 45	3736	69 47 36	3745
	Jupiter E.	95 0 57	2760	93 25 36	2749	91 50 1	2738	90 14 12	2728
	Fomalhaut E.	101 2 53	2974	99 32 8	2962	98 1 7	2950	96 29 51	2937
17	Sun W.	68 9 52	3043	69 39 12	3030	71 8 48	3015	72 38 42	3001
	Venus W.	47 55 9	2707	49 31 40	2688	51 8 36	2670	52 45 56	2652
	α Aquilæ E.	63 29 49	3819	62 15 6	3840	61 0 45	3865	59 46 50	3893
	Jupiter E.	82 11 21	2669	80 33 59	2657	78 56 21	2644	77 18 26	2632
	Fomalhaut E.	88 49 33	2876	87 16 43	2863	85 43 37	2852	84 10 16	2839
	α Pegasi E.	109 1 17	3092	107 32 57	3072	106 4 13	3052	104 35 5	3034
18	Sun W.	80 12 45	2927	81 44 30	2911	83 16 35	2895	84 49 0	2879
	Jupiter E.	69 4 26	2565	67 24 43	2551	65 44 41	2538	64 4 20	2523
	Fomalhaut E.	76 19 39	2781	74 44 46	2770	73 9 39	2759	71 34 17	2749
	α Pegasi E.	97 3 50	2947	95 32 31	2931	94 0 51	2915	92 28 51	2899
19	Sun W.	92 36 14	2798	94 10 44	2782	95 45 35	2766	97 20 48	2749
	Antares W.	20 46 19	2482	22 27 58	2465	24 10 1	2448	25 52 28	2431
	Jupiter E.	55 37 36	2452	53 55 15	2438	52 12 34	2422	50 29 31	2408
	Fomalhaut E.	63 34 9	2702	61 57 31	2694	60 20 43	2687	58 43 45	2681
	α Pegasi E.	84 44 5	2828	83 10 14	2816	81 36 7	2804	80 1 44	2792
20	Sun W.	105 22 25	2666	106 59 50	2649	108 37 38	2632	110 15 49	2617
	Antares W.	34 30 33	2350	36 15 19	2334	38 0 29	2319	39 46 1	2303
	Jupiter E.	41 49 11	2337	40 4 6	2324	38 18 41	2311	36 32 57	2298
	Fomalhaut E.	50 37 22	2668	48 59 59	2670	47 22 39	2675	45 45 25	2682
	α Pegasi E.	72 6 20	2746	70 30 41	2739	68 54 53	2733	67 18 57	2729
21	Sun W.	118 32 7	2538	120 12 27	2523	121 53 8	2509	123 34 9	2494
	Antares W.	48 39 19	2228	50 27 5	2214	52 15 11	2200	54 3 39	2186
	Jupiter E.	27 39 48	2243	25 52 24	2235	24 4 48	2229	22 17 3	2225
	α Pegasi E.	59 18 35	2732	57 42 37	2738	56 6 47	2747	54 31 9	2759
	α Arietis E.	99 47 30	2290	98 1 16	2276	96 14 41	2261	94 27 44	2247
22	Antares W.	63 10 59	2122	65 1 24	2111	66 52 6	2100	68 43 5	2090
	α Pegasi E.	46 38 25	2875	45 5 34	2914	43 33 33	2960	42 2 30	3014
	α Arietis E.	85 28 5	2184	83 39 14	2174	81 50 7	2163	80 0 44	2154
	Aldebaran E.	115 48 9	2176	113 59 6	2163	112 9 43	2151	110 20 2	2139
23	Antares W.	78 1 46	2045	79 54 10	2038	81 46 45	2031	83 39 31	2026
	α Aquilæ W.	42 28 29	4584	43 31 8	4398	44 36 31	4232	45 44 27	4085
	α Arietis E.	70 50 30	2116	68 59 55	2110	67 9 11	2105	65 18 20	2102
	Aldebaran E.	101 7 28	2091	99 16 15	2083	97 24 50	2076	95 33 14	2070
24	Antares W.	93 5 13	2007	94 58 37	2005	96 52 4	2004	98 45 32	2003
	α Aquilæ W.	51 55 54	3545	53 15 28	3469	54 36 27	3400	55 58 44	3337
	Jupiter W.	17 37 56	2070	19 29 41	2054	21 21 51	2042	23 14 20	2033

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
15	Venus W.	29 13 37	2991	30 44 1	2959	32 15 5	2930	33 46 46	2902
	Antares E.	24 49 8	2837	23 15 28	2829	21 41 38	2820	20 7 36	2813
	α Aquilæ E.	78 42 39	3710	77 26 3	3711	76 9 28	3713	74 52 55	3718
	Jupiter E.	101 20 8	2799	99 45 39	2790	98 10 58	2780	96 36 4	2770
16	Sun W.	62 15 20	3096	63 43 34	3083	65 12 4	3070	66 40 50	3057
	Venus W.	41 33 23	2785	43 8 10	2765	44 43 24	2745	46 19 4	2726
	α Aquilæ E.	68 31 36	3755	67 15 47	3768	66 0 12	3783	64 44 5	3799
	Jupiter E.	88 38 9	2716	87 1 50	2705	85 25 16	2693	83 48 27	2681
	Fomalhaut E.	94 58 19	2924	93 26 31	2912	91 54 27	2900	90 22 8	2887
17	Sun W.	74 8 54	2986	75 39 24	2972	77 10 12	2957	78 41 19	2942
	Venus W.	54 23 41	2634	56 1 50	2615	57 40 24	2598	59 19 22	2580
	α Aquilæ E.	58 33 23	3924	57 20 28	3959	56 8 8	3998	54 56 27	4043
	Jupiter E.	75 40 14	2618	74 1 44	2605	72 22 56	2592	70 43 50	2579
	Fomalhaut E.	82 36 39	2828	81 2 47	2815	79 28 39	2804	77 54 16	2793
	α Pegasi E.	103 5 34	3016	101 35 41	2998	100 5 26	2981	98 34 49	2963
18	Sun W.	86 21 46	2864	87 54 51	2847	89 28 18	2831	91 2 5	2814
	Jupiter E.	62 23 39	2509	60 42 38	2495	59 1 18	2480	57 19 37	2466
	Fomalhaut E.	69 58 42	2738	68 22 53	2728	66 46 51	2719	65 10 36	2710
	α Pegasi E.	90 56 31	2884	89 23 52	2869	87 50 54	2855	86 17 38	2842
19	Sun W.	98 56 23	2732	100 32 21	2716	102 8 40	2699	103 45 21	2682
	Antares W.	27 35 18	2414	29 18 32	2398	31 2 9	2382	32 46 9	2366
	Jupiter E.	48 46 8	2394	47 2 25	2380	45 18 21	2365	43 33 56	2351
	Fomalhaut E.	57 6 40	2675	55 29 27	2671	53 52 8	2669	52 14 46	2667
	α Pegasi E.	78 27 5	2782	76 52 13	2771	75 17 7	2762	73 41 49	2753
20	Sun W.	111 54 21	2601	113 33 15	2585	115 12 31	2569	116 52 8	2553
	Antares W.	41 31 56	2288	43 18 13	2272	45 4 53	2257	46 51 55	2243
	Jupiter E.	34 46 54	2285	33 0 33	2273	31 13 54	2262	29 26 59	2252
	Fomalhaut E.	44 8 21	2692	42 31 30	2705	40 54 57	2723	39 18 48	2746
	α Pegasi E.	65 42 56	2727	64 6 52	2725	62 30 45	2725	60 54 38	2728
21	Sun W.	125 15 31	2480	126 57 12	2467	128 39 12	2454	130 21 30	2441
	Antares W.	55 52 28	2173	57 41 36	2159	59 31 5	2147	61 20 52	2134
	Jupiter E.	20 29 12	2225	18 41 21	2229	16 53 36	2239	15 6 6	2258
	α Pegasi E.	52 55 47	2774	51 20 45	2792	49 46 7	2814	48 11 58	2842
	α Arietis E.	92 40 27	2234	90 52 50	2221	89 4 54	2208	87 16 38	2196
22	Antares W.	70 34 20	2080	72 25 50	2070	74 17 36	2061	76 9 35	2053
	α Pegasi E.	40 32 34	3078	39 3 57	3152	37 36 50	3240	36 11	
	α Arietis E.	78 11 7	2145	76 21 16	2136	74 31 12	2128	72	
	Aldebaran E.	108 30 3	2128	106 39 47	2118	104 49 15	2109	102	
23	Antares W.	85 32 25	2020	87 25 28	2016	89 18 37	2012		
	α Aquilæ W.	46 54 43	3953	48 7 9	3834	49 21 36	3728		
	α Arietis E.	63 27 24	2100	61 36 24	2098	59 45 22	2097		
	Aldebaran E.	93 41 29	2065	91 49 36	2060	89 57 35	2055		
24	Antares W.	100 39 1	2004	102 32 29	2006	104 25 54	200		
	α Aquilæ W.	57 22 13	3282	58 46 45	3232	60 12 16	31		
	Jupiter W.	25 7 3	2026	26 59 57	2022	28 52 57	20		

MEAN TIME.

LUNAR DISTANCES.

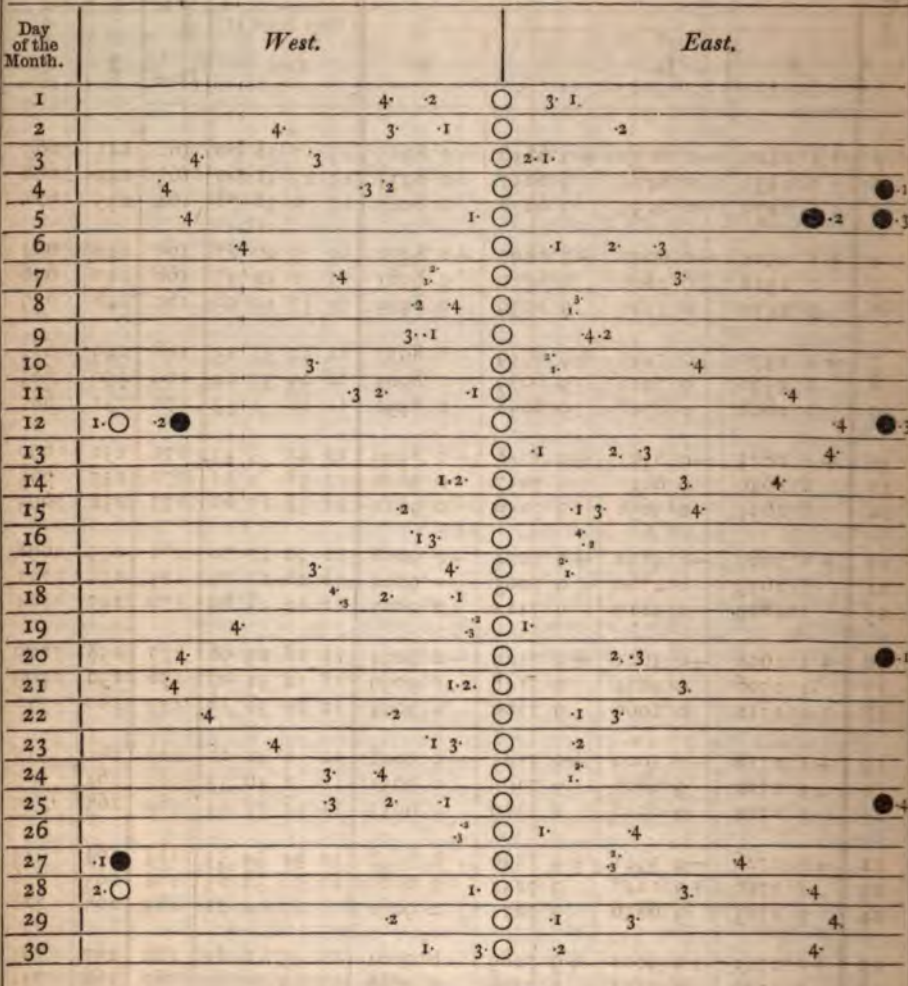
Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	α Arietis E.	56 3 17	2100	54 12 17	2103	52 21 22	2107	50 30 33	2113
	Aldebaran E.	86 13 18	2051	84 21 4	2050	82 28 47	2049	80 36 29	2050
	Saturn E.	108 24 39	2036	106 32 1	2034	104 39 20	2033	102 46 38	2032
25	α Aquilæ W.	63 5 50	3115	64 33 41	3085	66 2 9	3059	67 31 9	3037
	Jupiter W.	32 39 6	2019	34 32 10	2021	36 25 12	2024	38 18 9	2028
	α Arietis E.	41 19 27	2166	39 30 9	2183	37 41 16	2203	35 52 53	2226
	Aldebaran E.	71 15 37	2064	69 23 43	2070	67 31 57	2077	65 40 22	2084
	Saturn E.	93 23 14	2041	91 30 44	2046	89 38 21	2050	87 46 5	2057
	Pollux E.	115 5 52	2014	113 12 39	2019	111 19 34	2023	109 26 36	2029
26	α Aquilæ W.	75 1 40	2974	76 32 25	2970	78 3 16	2968	79 34 9	2969
	Jupiter W.	47 40 55	2061	49 32 54	2070	51 24 40	2080	53 16 10	2090
	Fomalhaut W.	42 55 47	2467	44 37 46	2451	46 20 8	2440	48 2 46	2431
	α Pegasi W.	28 56 58	4184	30 5 39	3962	31 17 56	3776	32 33 23	3622
	Aldebaran E.	56 25 44	2135	54 35 38	2149	52 45 53	2163	50 56 29	2178
	Saturn E.	78 27 25	2097	76 36 21	2107	74 45 32	2118	72 55 0	2129
	Pollux E.	100 4 22	2068	98 12 33	2078	96 21 0	2089	94 29 44	2100
27	α Aquilæ W.	87 7 24	3005	88 37 30	3018	90 7 20	3033	91 36 52	3051
	Jupiter W.	62 29 16	2153	64 18 55	2168	66 8 11	2182	67 57 6	2198
	Fomalhaut W.	56 37 51	2424	58 20 51	2429	60 3 45	2434	61 46 31	2442
	α Pegasi W.	39 25 7	3145	40 52 22	3090	42 20 44	3043	43 50 4	3004
	Aldebaran E.	41 55 48	2272	40 9 8	2296	38 23 2	2320	36 37 32	2347
	Saturn E.	63 47 4	2197	61 58 32	2212	60 10 23	2228	58 22 37	2245
	Pollux E.	85 17 56	2165	83 28 35	2179	81 39 36	2194	79 51 0	2209
	Mars E.	110 26 15	2360	108 41 43	2376	106 57 34	2391	105 13 46	2407
28	Jupiter W.	76 55 45	2279	78 42 15	2297	80 28 19	2315	82 13 57	2333
	Fomalhaut W.	70 17 10	2495	71 58 30	2509	73 39 30	2522	75 20 12	2538
	α Pegasi W.	51 26 22	2893	52 58 50	2883	54 31 31	2876	56 4 20	2872
	Saturn E.	49 30 13	2335	47 45 5	2355	46 0 25	2375	44 16 15	2396
	Pollux E.	70 53 55	2293	69 7 45	2310	67 22 0	2328	65 36 42	2346
	Mars E.	96 40 38	2492	94 59 14	2511	93 18 16	2529	91 37 43	2548
	Regulus E.	107 25 31	2304	105 39 37	2322	103 54 9	2340	102 9 7	2357
29	Jupiter W.	90 55 31	2425	92 38 30	2444	94 21 2	2463	96 3 7	2482
	Fomalhaut W.	83 38 14	2621	85 16 41	2638	86 54 44	2657	88 32 22	2675
	α Pegasi W.	63 48 51	2882	65 21 33	2889	66 54 6	2897	68 26 29	2905
	Saturn E.	35 43 0	2507	34 1 57	2532	32 21 29	2558	30 41 36	2585
	Pollux E.	56 56 45	2439	55 14 6	2458	53 31 53	2477	51 50 8	2495
	Mars E.	83 21 33	2645	81 43 39	2664	80 6 11	2684	78 29 9	2704
	Regulus E.	93 30 26	2449	91 48 1	2467	90 6 2	2487	88 24 30	2505
	Sun E.	131 26 50	2767	129 51 39	2787	128 16 54	2807	126 42 35	2827
30	Jupiter W.	104 26 57	2576	106 6 25	2594	107 45 28	2613	109 24 5	2632
	α Pegasi W.	76 5 9	2964	77 36 7	2978	79 6 47	2992	80 37 10	3006
	α Arietis W.	32 38 32	2802	34 12 57	2804	35 47 20	2806	37 21 40	2811
	Pollux E.	43 27 54	2590	41 48 45	2609	40 10 2	2627	38 31 44	2645
	Mars E.	70 30 36	2802	68 56 10	2821	67 22 10	2841	65 48 35	2860
	Regulus E.	80 3 23	2599	78 24 26	2618	76 45 56	2636	75 7 50	2654
	Sun E.	118 57 28	2927	117 25 43	2946	115 54 23	2966	114 23 27	2985

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	α Arietis E.	48 39 53	2120	46 49 24	2128	44 59 8	2139	43 9 8	2151
	Aldebaran E.	78 44 12	2051	76 51 57	2053	74 59 46	2055	73 7 38	2060
	Saturn E.	100 53 54	2032	99 1 10	2033	97 8 28	2035	95 15 49	2038
25	α Aquilæ W.	69 0 36	3018	70 30 27	3002	72 0 37	2990	73 31 2	2980
	Jupiter W.	40 11 0	2032	42 3 44	2038	43 56 19	2045	45 48 43	2053
	α Arietis E.	34 5 4	2253	32 17 55	2284	30 31 32	2320	28 46 2	2364
	Aldebaran E.	63 48 58	2092	61 57 46	2101	60 6 49	2112	58 16 8	2123
	Saturn E.	85 53 59	2063	84 2 3	2070	82 10 18	2078	80 18 45	2087
	Pollux E.	107 33 47	2035	105 41 8	2042	103 48 40	2050	101 56 24	2059
26	α Aquilæ W.	81 5 1	2972	82 35 49	2977	84 6 31	2985	85 37 3	2993
	Jupiter W.	55 7 24	2102	56 58 20	2114	58 48 58	2126	60 39 17	2139
	Fomalhaut W.	49 45 37	2424	51 28 37	2421	53 11 41	2421	54 54 46	2421
	α Pegasi W.	33 51 34	3491	35 12 8	3381	36 34 46	3289	37 59 10	3210
	Aldebaran E.	49 7 28	2194	47 18 52	2212	45 30 42	2231	43 43 0	2251
	Saturn E.	71 4 45	2142	69 14 50	2155	67 25 14	2168	65 35 58	2182
	Pollux E.	92 38 44	2112	90 48 3	2124	88 57 41	2137	87 7 38	2151
27	α Aquilæ W.	93 6 2	3069	94 34 49	3090	96 3 11	3112	97 31 6	3136
	Jupiter W.	69 45 37	2213	71 33 46	2229	73 21 30	2245	75 8 50	2262
	Fomalhaut W.	63 29 6	2450	65 11 29	2460	66 53 38	2471	68 35 32	2482
	α Pegasi W.	45 20 12	2971	46 51 1	2945	48 22 23	2924	49 54 12	2907
	Aldebaran E.	34 52 41	2376	33 8 32	2407	31 25 8	2442	29 42 33	2481
	Saturn E.	56 35 17	2262	54 48 21	2280	53 1 52	2298	51 15 49	2316
	Pollux E.	78 2 46	2226	76 14 57	2242	74 27 32	2258	72 40 31	2275
	Mars E.	103 30 21	2423	101 47 19	2440	100 4 41	2457	98 22 27	2474
28	Jupiter W.	83 59 9	2351	85 43 54	2369	87 28 13	2388	89 12 5	2406
	Fomalhaut W.	77 0 32	2553	78 40 31	2569	80 20 8	2585	81 59 23	2603
	α Pegasi W.	57 37 15	2870	59 10 12	2870	60 43 9	2873	62 16 2	2877
	Saturn E.	42 32 34	2417	40 49 23	2438	39 6 43	2461	37 24 35	2484
	Pollux E.	63 51 49	2364	62 7 23	2383	60 23 24	2401	58 39 51	2420
	Mars E.	89 57 36	2567	88 17 56	2586	86 38 42	2605	84 59 54	2625
	Regulus E.	100 24 30	2375	98 40 20	2393	96 56 35	2412	95 13 17	2431
29	Jupiter W.	97 44 46	2501	99 25 58	2520	101 6 44	2538	102 47 4	2558
	Fomalhaut W.	90 9 35	2694	91 46 23	2713	93 22 46	2732	94 58 43	2752
	α Pegasi W.	69 58 41	2916	71 30 40	2927	73 2 24	2938	74 33 54	2950
	Saturn E.	29 2 20	2613	27 23 43	2643	25 45 46	2675	[illegible]	2710
	Pollux E.	50 8 48	2514	48 27 55	2534	46 47 29	2553	[illegible]	2571
	Mars E.	76 52 34	2723	75 16 25	2744	73 40 43	276[illegible]	[illegible]	2783
	Regulus E.	86 43 24	2525	85 2 45	2543	83 22 31	[illegible]	[illegible]	2581
	Sun E.	125 8 42	2847	123 35 15	2867	122 2 14			2906
30	Jupiter W.	111 2 17	2649	112 40 5	2667	114 17 2			02
	α Pegasi W.	82 7 15	3021	83 37 2	3037	85 6 [illegible]			59
	α Arietis W.	38 55 53	2818	40 29 58	2825	42 3			2
	Pollux E.	36 53 50	2664	35 16 22	2681	33 39			7
	Mars E.	64 15 25	2879	62 42 39	2898	61 10			
	Regulus E.	73 30 9	2672	71 52 52	2690	70 15			
	Sun E.	112 52 56	3004	111 22 48	3023	109 5[illegible]			

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 12h, Mean Time.

This Table represents, at 12h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shadow, of *Jupiter*.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d \cdot 418488$. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	+1·2426	−0·8657	+9·6836	−0·8925	13 17 28·60	162	243	·665
2	1·2453	0·8461	9·6857	0·8934	13 13 32·69	163	244	·668
3	1·2479	0·8255	9·6878	0·8943	13 9 36·78	164	245	·671
4	+1·2504	−0·8037	+9·6899	−0·8952	13 5 40·87	165	246	·674
5	1·2528	0·7806	9·6919	0·8961	13 1 44·97	166	247	·676
6	1·2550	0·7560	9·6939	0·8969	12 57 49·06	167	248	·679
7	+1·2570	−0·7299	+9·6959	−0·8977	12 53 53·15	168	249	·682
8	1·2590	0·7019	9·6979	0·8985	12 49 57·24	169	250	·684
9	1·2608	0·6718	9·6998	0·8992	12 46 1·33	170	251	·687
10	+1·2625	−0·6393	+9·7018	−0·8999	12 42 5·43	171	252	·690
11	1·2640	0·6041	9·7037	0·9006	12 38 9·52	172	253	·693
12	1·2654	0·5656	9·7056	0·9012	12 34 13·61	173	254	·695
13	+1·2667	−0·5232	+9·7074	−0·9018	12 30 17·70	174	255	·698
14	1·2679	0·4760	9·7093	0·9024	12 26 21·79	175	256	·701
15	1·2689	0·4229	9·7111	0·9029	12 22 25·89	176	257	·704
16	+1·2698	−0·3621	+9·7129	−0·9034	12 18 29·98	177	258	·706
17	1·2706	0·2914	9·7148	0·9039	12 14 34·07	178	259	·709
18	1·2712	0·2066	9·7166	0·9044	12 10 38·16	179	260	·712
19	+1·2718	−0·1009	+9·7184	−0·9048	12 6 42·26	180	261	·715
20	1·2722	9·9606	9·7201	0·9051	12 2 46·35	181	262	·717
21	1·2724	9·7518	9·7219	0·9055	11 58 50·44	182	263	·720
22	+1·2726	−9·3341	+9·7236	−0·9058	11 54 54·53	183	264	·723
23	1·2726	+9·1247	9·7254	0·9060	11 50 58·63	184	265	·726
24	1·2725	9·6836	9·7271	0·9062	11 47 2·72	185	266	·728
25	+1·2722	+9·9201	+9·7289	−0·9064	11 43 6·81	186	267	·731
26	1·2719	0·0723	9·7306	0·9066	11 39 10·90	187	268	·734
27	1·2714	0·1848	9·7324	0·9067	11 35 15·00	188	269	·736
28	+1·2707	+0·2740	+9·7341	−0·9068	11 31 19·09	189	270	
29	1·2700	0·3479	9·7358	0·9069	11 27 23·18	190	271	
30	1·2691	0·4109	9·7375	0·9069	11 23 27·27	191	27	
31	+1·2681	+0·4659	+9·7393	−0·9069	11 19 31·36	192		

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be subtracted from Apparent Time.*	Diff. for 1 hour.
		h m s	s	° ′ ″	″	m s	m s	s
Mon.	1	12 28 22·67	9·060	S. 3 4 4·6	58·27	1 4·34	10 12·65	0·795
Tues.	2	12 32 0·10	9·073	3 27 23·1	58·18	1 4·38	10 31·72	0·781
Wed.	3	12 35 37·85	9·087	3 50 39·4	58·08	1 4·43	10 50·48	0·768
Thur.	4	12 39 15·94	9·102	4 13 53·2	57·96	1 4·48	11 8·90	0·753
Frid.	5	12 42 54·39	9·118	4 37 4·2	57·82	1 4·53	11 26·95	0·737
Sat.	6	12 46 33·22	9·135	5 0 11·8	57·67	1 4·59	11 44·63	0·720
Sun.	7	12 50 12·45	9·152	5 23 15·9	57·50	1 4·65	12 1·90	0·703
Mon.	8	12 53 52·10	9·170	5 46 16·0	57·32	1 4·71	12 18·76	0·685
Tues.	9	12 57 32·18	9·189	6 9 11·6	57·12	1 4·77	12 35·19	0·666
Wed.	10	13 1 12·71	9·208	6 32 2·5	56·90	1 4·84	12 51·17	0·647
Thur.	11	13 4 53·70	9·228	6 54 48·2	56·67	1 4·91	13 6·69	0·627
Frid.	12	13 8 35·18	9·249	7 17 28·3	56·42	1 4·98	13 21·73	0·606
Sat.	13	13 12 17·15	9·270	7 40 2·4	56·15	1 5·05	13 36·27	0·585
Sun.	14	13 15 59·63	9·292	8 2 30·0	55·87	1 5·13	13 50·30	0·563
Mon.	15	13 19 42·64	9·315	8 24 50·9	55·57	1 5·21	14 3·80	0·540
Tues.	16	13 23 26·20	9·338	8 47 4·6	55·25	1 5·30	14 16·77	0·517
Wed.	17	13 27 10·31	9·362	9 9 10·6	54·92	1 5·38	14 29·18	0·493
Thur.	18	13 30 55·00	9·387	9 31 8·7	54·57	1 5·47	14 41·01	0·469
Frid.	19	13 34 40·28	9·412	9 52 58·4	54·20	1 5·56	14 52·25	0·444
Sat.	20	13 38 26·16	9·438	10 14 39·2	53·82	1 5·65	15 2·90	0·417
Sun.	21	13 42 12·67	9·465	10 36 10·9	53·43	1 5·75	15 12·92	0·390
Mon.	22	13 45 59·82	9·492	10 57 33·1	53·01	1 5·85	15 22·29	0·363
Tues.	23	13 49 47·64	9·520	11 18 45·3	52·58	1 5·94	15 31·01	0·335
Wed.	24	13 53 36·13	9·550	11 39 47·3	52·14	1 6·04	15 39·05	0·306
Thur.	25	13 57 25·32	9·580	12 0 38·7	51·68	1 6·15	15 46·40	0·276
Frid.	26	14 1 15·23	9·610	12 21 19·0	51·21	1 6·25	15 53·03	0·246
Sat.	27	14 5 5·86	9·641	12 41 47·9	50·72	1 6·36	15 58·93	0·215
Sun.	28	14 8 57·25	9·673	13 2 5·1	50·21	1 6·47	16 4·08	0·183
Mon.	29	14 12 49·41	9·705	13 22 10·0	49·69	1 6·58	16 8·47	0·150
Tues.	30	14 16 42·34	9·738	13 42 2·5	49·15	1 6·69	16 12·08	0·117
Wed.	31	14 20 36·06	9·772	14 1 42·0	48·59	1 6·80	16 14·91	0·084
Thur.	32	14 24 30·60		S. 14 21 8·2		1 6·91	16 16·93	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ˢ·18 from the *Sidereal* Time.

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be added to Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Mon.	1	12 28 24·22	S. 3 4 14·5	16 1·3	10 12·79	12 38 37·01
Tues.	2	12 32 1·70	3 27 33·3	16 1·6	10 31·86	12 42 33·56
Wed.	3	12 35 39·50	3 50 49·9	16 1·9	10 50·62	12 46 30·12
Thur.	4	12 39 17·63	4 14 4·0	16 2·2	11 9·04	12 50 26·67
Frid.	5	12 42 56·13	4 37 15·2	16 2·4	11 27·09	12 54 23·22
Sat.	6	12 46 35·01	5 0 23·1	16 2·7	11 44·77	12 58 19·78
Sun.	7	12 50 14·29	5 23 27·4	16 3·0	12 2·04	13 2 16·33
Mon.	8	12 53 53·98	5 46 27·7	16 3·3	12 18·90	13 6 12·88
Tues.	9	12 57 34·11	6 9 23·6	16 3·5	12 35·33	13 10 9·44
Wed.	10	13 1 14·68	6 32 14·7	16 3·8	12 51·31	13 14 5·99
Thur.	11	13 4 55·72	6 55 0·6	16 4·0	13 6·83	13 18 2·55
Frid.	12	13 8 37·24	7 17 40·8	16 4·3	13 21·86	13 21 59·10
Sat.	13	13 12 19·25	7 40 15·1	16 4·6	13 36·40	13 25 55·65
Sun.	14	13 16 1·78	8 2 42·9	16 4·9	13 50·43	13 29 52·21
Mon.	15	13 19 44·83	8 25 3·9	16 5·2	14 3·93	13 33 48·76
Tues.	16	13 23 28·42	8 47 17·7	16 5·5	14 16·90	13 37 45·32
Wed.	17	13 27 12·57	9 9 23·9	16 5·7	14 29·30	13 41 41·87
Thur.	18	13 30 57·30	9 31 22·1	16 6·0	14 41·13	13 45 38·43
Frid.	19	13 34 42·61	9 53 11·8	16 6·3	14 52·36	13 49 34·98
Sat.	20	13 38 28·53	10 14 52·7	16 6·6	15 3·00	13 53 31·53
Sun.	21	13 42 15·07	10 36 24·5	16 6·8	15 13·02	13 57 28·09
Mon.	22	13 46 2·26	10 57 46·7	16 7·1	15 22·38	14 1 24·64
Tues.	23	13 49 50·10	11 18 58·9	16 7·4	15 31·10	14 5 21·20
Wed.	24	13 53 38·62	11 40 0·9	16 7·7	15 39·13	14 9 17·75
Thur.	25	13 57 27·84	12 0 52·2	16 7·9	15 46·47	14 13 14·31
Frid.	26	14 1 17·77	12 21 32·5	16 8·2	15 53·09	14 17 10·86
Sat.	27	14 5 8·43	12 42 1·4	16 8·4	15 58·99	14 21 [illegible]
Sun.	28	14 8 59·84	13 2 18·5	16 8·7	16 4·13	14 [illegible]
Mon.	29	14 12 52·02	13 22 23·4	16 8·9	16 8·51	14 [illegible]
Tues.	30	14 16 44·97	13 42 15·7	16 9·2	16 12·11	[illegible]
Wed.	31	14 20 38·71	14 1 55·2	16 9·4	16 14·93	[illegible]
Thur.	32	14 24 33·26	S. 14 21 21·3	16 9·7	16 16·94	

* The Semidiameter for *Apparent* Noon may be assumed the same as that for [illegible]

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent*		Logarithm of the Radius Vector of the Earth.	THE MOON'S			
	Longitude.	Latitude.		Semidiameter.		Horizontal Parallax.	
	Noon.	*Noon.*	*Noon.*	*Noon.*	*Midnight.*	*Noon.*	*Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	187 43 59·8	N.0·69	0·0002287	15 26·4	15 19·6	56 33·0	56 8·3
2	188 43 4·4	0·78	0·0001064	15 13·4	15 7·8	55 45·5	55 24·8
3	189 42 11·3	0·85	9·9999841	15 2·7	14 58·3	55 6·3	54 50·3
4	190 41 20·5	0·89	9·9998617	14 54·6	14 51·6	54 36·7	54 25·7
5	191 40 32·0	0·89	9·9997392	14 49·3	14 47·6	54 17·1	54 10·9
6	192 39 45·8	0·88	9·9996166	14 46·5	14 46·0	54 6·9	54 5·1
7	193 39 1·9	0·83	9·9994936	14 46·0	14 46·6	54 5·3	54 7·4
8	194 38 20·3	0·75	9·9993701	14 47·7	14 49·2	54 11·2	54 16·7
9	195 37 40·9	0·65	9·9992462	14 51·1	14 53·3	54 23·6	54 31·8
10	196 37 3·6	0·53	9·9991219	14 55·8	14 58·6	54 41·0	54 51·1
11	197 36 28·4	0·39	9·9989973	15 1·6	15 4·9	55 2·2	55 14·1
12	198 35 55·2	0·26	9·9988723	15 8·3	15 11·9	55 26·7	55 40·0
13	199 35 24·0	N.0·12	9·9987471	15 15·7	15 19·6	55 53·8	56 8·0
14	200 34 54·7	0·00	9·9986215	15 23·6	15 27·7	56 22·7	56 37·9
15	201 34 27·2	S.0·11	9·9984958	15 32·0	15 36·4	56 53·6	57 9·7
16	202 34 1·5	0·20	9·9983702	15 40·9	15 45·5	57 26·2	57 43·1
17	203 33 37·6	0·26	9·9982448	15 50·2	15 54·9	58 0·2	58 17·5
18	204 33 15·5	0·29	9·9981198	15 59·6	16 4·3	58 34·8	58 51·9
19	205 32 55·1	0·29	9·9979952	16 8·8	16 13·1	59 8·5	59 24·3
20	206 32 36·3	0·27	9·9978713	16 17·1	16 20·6	59 38·7	59 51·6
21	207 32 19·2	0·21	9·9977482	16 23·6	16 25·8	60 2·4	60 10·8
22	208 32 3·9	0·12	9·9976261	16 27·4	16 28·0	60 16·4	60 18·7
23	209 31 50·4	S.0·01	9·9975050	16 27·7	16 26·4	60 17·6	60 13·0
24	210 31 38·8	N.0·11	9·9973851	16 24·3	16 21·1	60 4·9	59 53·4
25	211 31 29·0	0·24	9·9972664	16 17·1	16 12·3	59 38·8	59 21·2
26	212 31 21·2	0·37	9·9971493	16 6·8	16 0·8	59 1·1	58 38·9
27	213 31 15·3	0·50	9·9970335	15 54·3	15 47·6	58 15·3	57 50·7
28	214 31 11·5	0·61	9·9969191	15 40·7	15 33·9	57 25·6	57 0·5
29	215 31 9·7	0·71	9·9968060	15 27·2	15 20·8	56 35·9	56 12·4
30	216 31 10·0	0·78	9·9966942	15 14·8	15 9·1	55 50·2	55 29·8
31	217 31 12·5	0·82	9·9965836	15 4·1	14 59·7	55 11·5	54 55·4
32	218 31 17·2	N.0·84	9·9964743	14 56·0	14 53·0	54 41·7	54 30·6

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Mon.	1	80 46 55·0	87 9 13·3	N. 3 49 27·1	N. 4 11 51·5	20·0	17 18·3
Tues.	2	93 26 23·9	99 38 58·3	4 30 54·8	4 46 32·5	21·0	18 12·4
Wed.	3	105 47 30·0	111 52 32·3	4 58 41·8	5 7 22·1	22·0	19 4·2
Thur.	4	117 54 39·4	123 54 24·1	5 12 33·5	5 14 17·5	23·0	19 53·1
Frid.	5	129 52 18·7	135 48 54·0	5 12 36·8	5 7 35·1	24·0	20 39·0
Sat.	6	141 44 38·9	147 40 0·1	4 59 16·5	4 47 46·4	25·0	21 22·1
Sun.	7	153 35 23·1	159 31 10·5	4 33 11·1	4 15 38·8	26·0	22 3·2
Mon.	8	165 27 43·5	171 25 20·7	3 55 18·1	3 32 19·3	27·0	22 43·2
Tues.	9	177 24 18·9	183 24 53·0	3 6 55·0	2 39 18·9	28·0	23 23·0
Wed.	10	189 27 16·6	195 31 41·8	2 9 45·5	1 38 33·1	29·0	☌
Thur.	11	201 38 19·4	207 47 19·7	N. 1 6 0·0	N. 0 32 27·0	0·4	0 3·7
Frid.	12	213 58 52·6	220 13 7·5	S. 0 1 44·1	S. 0 36 9·8	1·4	0 46·3
Sat.	13	226 30 14·2	232 50 22·5	1 10 26·0	1 44 7·3	2·4	1 31·7
Sun.	14	239 13 42·6	245 40 25·1	2 16 48·3	2 48 2·4	3·4	2 20·9
Mon.	15	252 10 41·0	258 44 40·8	3 17 23·9	3 44 26·7	4·4	3 14·2
Tues.	16	265 22 34·9	272 4 32·5	4 8 45·8	4 29 56·8	5·4	4 11·2
Wed.	17	278 50 41·8	285 41 8·2	4 47 36·3	5 1 23·2	6·4	5 10·7
Thur.	18	292 35 54·4	299 34 59·3	5 10 58·1	5 16 5·0	7·4	6 10·5
Frid.	19	306 38 17·3	313 45 37·6	5 16 30·2	5 12 5·7	8·4	7 8·8
Sat.	20	320 56 43·1	328 11 11·0	5 2 46·9	4 48 36·0	9·4	8 4·4
Sun.	21	335 28 31·9	342 48 9·7	4 29 40·8	4 6 15·6	10·4	8 57·2
Mon.	22	350 9 23·0	357 31 25·4	3 38 41·2	3 7 26·1	11·4	9 48·1
Tues.	23	4 53 26·6	12 14 34·6	2 33 3·4	1 56 11·4	12·4	10 38·0
Wed.	24	19 33 56·9	26 50 42·7	S. 1 17 32·6	S. 0 37 50·5	13·4	11 28·2
Thur.	25	34 4 4·9	41 13 19·7	N. 0 2 9·7	N. 0 41 45·5		
Frid.	26	48 17 51·0	55 17 9·2	1 20 16·2	1 57 5·(		
Sat.	27	62 10 52·0	68 58 45·2	2 31 42·0	3 3 38		
Sun.	28	75 40 42·4	82 16 44·6	3 32 34·8	3 58		
Mon.	29	88 46 59·7	95 11 41·5	4 20 24·0	4 38		
Tues.	30	101 31 10·0	107 45 48·6	4 53 52·0	5 5		
Wed.	31	113 56 5·8	120 2 31·6	5 12 37·0	5 16		
Thur.	32	126 5 39·3	132 6 3·1	N. 5 16 52·3	N. 5		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 1.				*WEDNESDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	5 18 40·85	N.26 57 15·8	42·12	0	7 11 10·03	N.27 28 3·8	29·25
1	5 21 3·50	27 1 28·5	40·57	1	7 13 26·60	27 25 8·3	30·60
2	5 23 26·15	27 5 31·9	39·02	2	7 15 42·94	27 22 4·7	31·95
3	5 25 48·78	27 9 26·0	37·47	3	7 17 59·04	27 18 53·0	33·28
4	5 28 11·39	27 13 10·8	35·93	4	7 20 14·89	27 15 33·3	34·63
5	5 30 33·97	27 16 46·4	34·37	5	7 22 30·50	27 12 5·5	35·97
6	5 32 56·53	27 20 12·6	32·82	6	7 24 45·86	27 8 29·7	37·28
7	5 35 19·05	27 23 29·5	31·27	7	7 27 0·97	27 4 46·0	38·60
8	5 37 41·53	27 26 37·1	29·73	8	7 29 15·82	27 0 54·4	39·90
9	5 40 3·97	27 29 35·5	28·17	9	7 31 30·42	26 56 55·0	41·22
10	5 42 26·36	27 32 24·5	26·65	10	7 33 44·76	26 52 47·7	42·48
11	5 44 48·70	27 35 4·4	25·08	11	7 35 58·84	26 48 32·8	43·78
12	5 47 10·97	27 37 34·9	23·55	12	7 38 12·65	26 44 10·1	45·05
13	5 49 33·18	27 39 56·2	22·02	13	7 40 26·19	26 39 39·8	46·32
14	5 51 55·32	27 42 8·3	20·48	14	7 42 39·46	26 35 1·9	47·58
15	5 54 17·38	27 44 11·2	18·95	15	7 44 52·46	26 30 16·4	48·82
16	5 56 39·36	27 46 4·9	17·42	16	7 47 5·19	26 25 23·5	50·07
17	5 59 1·26	27 47 49·4	15·88	17	7 49 17·64	26 20 23·1	51·30
18	6 1 23·06	27 49 24·7	14·37	18	7 51 29·81	26 15 15·3	52·53
19	6 3 44·77	27 50 50·9	12·83	19	7 53 41·71	26 10 0·1	53·75
20	6 6 6·38	27 52 7·9	11·32	20	7 55 53·32	26 4 37·6	54·95
21	6 8 27·88	27 53 15·8	9·82	21	7 58 4·64	25 59 7·9	56·15
22	6 10 49·26	27 54 14·7	8·30	22	8 0 15·68	25 53 31·0	57·33
23	6 13 10·53	N.27 55 4·5	6·78	23	8 2 26·44	N.25 47 47·0	58·53
	TUESDAY 2.				*THURSDAY* 4.		
0	6 15 31·68	N.27 55 45·2	5·28	0	8 4 36·91	N.25 41 55·8	59·70
1	6 17 52·70	27 56 16·9	3·78	1	8 6 47·09	25 35 57·6	60·87
2	6 20 13·59	27 56 39·6	2·30	2	8 8 56·98	25 29 52·4	62·02
3	6 22 34·34	27 56 53·4	0·80	3	8 11 6·57	25 23 40·3	63·18
4	6 24 54·94	27 56 58·2	0·68	4	8 13 15·88	25 17 21·2	64·30
5	6 27 15·40	27 56 54·1	2·18	5	8 15 24·89	25 10 55·4	65·45
6	6 29 35·71	27 56 41·0	3·63	6	8 17 33·60	25 4 22·7	66·55
7	6 31 55·86	27 56 19·2	5·12	7	8 19 42·03	24 57 43·4	67·68
8	6 34 15·85	27 55 48·5	6·58	8	8 21 50·16	24 50 57·3	68·78
9	6 36 35·67	27 55 9·0	8·05	9	8 23 57·99	24 44 4·6	69·87
10	6 38 55·32	27 54 20·7	9·50	10	8 26 5·53	24 37 5·4	70·97
11	6 41 14·80	27 53 23·7	10·95	11	8 28 12·77	24 29 59·6	72·03
12	6 43 34·09	27 52 18·0	12·40	12	8 30 19·71	24 22 47·4	73·10
13	6 45 53·20	27 51 3·6	13·83	13	8 32 26·36	24 15 28·8	74·17
14	6 48 12·12	27 49 40·6	15·27	14	8 34 32·71	24 8 3·8	75·22
15	6 50 30·85	27 48 9·0	16·70	15	8 36 38·76	24 0 32·5	76·27
16	6 52 49·38	27 46 28·8	18·12	16	8 38 44·52	23 52 54·9	77·28
17	6 55 7·71	27 44 40·1	19·53	17	8 40 49·98	23 45 11·2	78·32
18	6 57 25·84	27 42 42·9	20·93	18	8 42 55·14	23 37 21·3	79·33
19	6 59 43·75	27 40 37·3	22·35	19	8 45 0·01	23 29 25·3	80·33
20	7 2 1·45	27 38 23·2	23·73	20	8 47 4·58	23 21 23·3	81·35
21	7 4 18·93	27 36 0·8	25·12	21	8 49 8·86	23 13 15·2	82·32
22	7 6 36·19	27 33 30·1	26·50	22	8 51 12·84	23 5 1·3	83·30
23	7 8 53·23	27 30 51·1	27·88	23	8 53 16·53	22 56 41·5	84·28
24	7 11 10·03	N.27 28 3·8		24	8 55 19·93	N.22 48 15·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 5.		
	h m s	° ′ ″	″
0	8 55 19·93	N.22 48 15·8	85·23
1	8 57 23·04	22 39 44·4	86·20
2	8 59 25·85	22 31 7·2	87·13
3	9 1 28·38	22 22 24·4	88·07
4	9 3 30·62	22 13 36·0	89·00
5	9 5 32·57	22 4 42·0	89·92
6	9 7 34·23	21 55 42·5	90·83
7	9 9 35·61	21 46 37·5	91·72
8	9 11 36·71	21 37 27·2	92·63
9	9 13 37·52	21 28 11·4	93·50
10	9 15 38·05	21 18 50·4	94·38
11	9 17 38·30	21 9 24·1	95·25
12	9 19 38·27	20 59 52·6	96·10
13	9 21 37·97	20 50 16·0	96·97
14	9 23 37·39	20 40 34·2	97·80
15	9 25 36·54	20 30 47·4	98·63
16	9 27 35·42	20 20 55·6	99·45
17	9 29 34·03	20 10 58·9	100·28
18	9 31 32·38	20 0 57·2	101·07
19	9 33 30·45	19 50 50·8	101·88
20	9 35 28·27	19 40 39·5	102·67
21	9 37 25·83	19 30 23·5	103·45
22	9 39 23·13	19 20 2·8	104·23
23	9 41 20·16	N.19 9 37·4	104·98
	SATURDAY 6.		
0	9 43 16·95	N.18 59 7·5	105·75
1	9 45 13·48	18 48 33·0	106·48
2	9 47 9·77	18 37 54·1	107·25
3	9 49 5·80	18 27 10·6	107·97
4	9 51 1·59	18 16 22·8	108·68
5	9 52 57·14	18 5 30·7	109·40
6	9 54 52·45	17 54 34·3	110·12
7	9 56 47·52	17 43 33·6	110·82
8	9 58 42·36	17 32 28·7	111·52
9	10 0 36·97	17 21 19·6	112·18
10	10 2 31·35	17 10 6·5	112·87
11	10 4 25·50	16 58 49·3	113·53
12	10 6 19·43	16 47 28·1	114·20
13	10 8 13·14	16 36 2·9	114·83
14	10 10 6·62	16 24 33·9	115·48
15	10 11 59·90	16 13 1·0	116·13
16	10 13 52·96	16 1 24·2	116·75
17	10 15 45·81	15 49 43·7	117·37
18	10 17 38·46	15 37 59·5	117·98
19	10 19 30·90	15 26 11·6	118·58
20	10 21 23·14	15 14 20·1	119·18
21	10 23 15·19	15 2 25·0	119·77
22	10 25 7·04	14 50 26·4	120·35
23	10 26 58·70	14 38 24·3	120·92
24	10 28 50·17	N.14 26 18·8	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 7.		
	h m s	° ′ ″	″
0	10 28 50·17	N.14 26 18·8	121·48
1	10 30 41·46	14 14 9·9	122·05
2	10 32 32·56	14 1 57·6	122·58
3	10 34 23·49	13 49 42·1	123·13
4	10 36 14·24	13 37 23·3	123·67
5	10 38 4·82	13 25 1·3	124·20
6	10 39 55·23	13 12 36·1	124·70
7	10 41 45·48	13 0 7·9	125·23
8	10 43 35·57	12 47 36·5	125·72
9	10 45 25·49	12 35 2·2	126·23
10	10 47 15·26	12 22 24·8	126·72
11	10 49 4·88	12 9 44·5	127·18
12	10 50 54·35	11 57 1·4	127·67
13	10 52 43·68	11 44 15·4	128·13
14	10 54 32·86	11 31 26·6	128·58
15	10 56 21·91	11 18 35·1	129·05
16	10 58 10·82	11 5 40·8	129·48
17	10 59 59·61	10 52 43·9	129·92
18	11 1 48·26	10 39 44·4	130·35
19	11 3 36·79	10 26 42·3	130·77
20	11 5 25·20	10 13 37·7	131·18
21	11 7 13·49	10 0 30·6	131·58
22	11 9 1·68	9 47 21·1	131·98
23	11 10 49·75	N. 9 34 9·2	132·38
	MONDAY 8.		
0	11 12 37·71	N. 9 20 54·9	132·77
1	11 14 25·57	9 7 38·3	133·13
2	11 16 13·33	8 54 19·5	133·52
3	11 18 1·00	8 40 58·4	133·87
4	11 19 48·58	8 27 35·2	134·22
5	11 21 36·07	8 14 9·9	134·57
6	11 23 23·47	8 0 42·5	134·92
7	11 25 10·80	7 47 13·0	135·23
8	11 26 58·04	7 33 41·6	135·57
9	11 28 45·22	7 20 8·2	135·88
10	11 30 32·32	7 6 32·9	136·18
11	11 32 19·36	6 52 55·8	136·48
12	11 34 6·34	6 39 16·9	136·78
13	11 35 53·26	6 25 36·2	137·07
14	11 37 40·13	6 11 53·8	
15	11 39 26·94	5 58 c	
16	11 41 13·71	5 44	
17	11 43 0·44	5 30	
18	11 44 47·12	5 1	
19	11 46 33·78	5	
20	11 48 20·40	4 4	
21	11 50 6·99	4 3	
22	11 51 53·56	4 2	
23	11 53 40·11	4	
24	11 55 26·64	N. 3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 9.		
	h m s	° ′ ″	″
0	11 55 26·64	N. 3 53 25·7	139·70
1	11 57 13·16	3 39 27·5	139·90
2	11 58 59·67	3 25 28·1	140·10
3	12 0 46·18	3 11 27·5	140·27
4	12 2 32·69	2 57 25·9	140·43
5	12 4 19·20	2 43 23·3	140·60
6	12 6 5·72	2 29 19·7	140·77
7	12 7 52·25	2 15 15·1	140·90
8	12 9 38·80	2 1 9·7	141·05
9	12 11 25·37	1 47 3·4	141·18
10	12 13 11·96	1 32 56·3	141·30
11	12 14 58·57	1 18 48·5	141·43
12	12 16 45·22	1 4 39·9	141·53
13	12 18 31·90	0 50 30·7	141·65
14	12 20 18·62	0 36 20·8	141·73
15	12 22 5·39	0 22 10·4	141·82
16	12 23 52·20	N. 0 7 59·5	141·88
17	12 25 39·06	S. 0 6 11·8	141·97
18	12 27 25·97	0 20 23·6	142·02
19	12 29 12·95	0 34 35·7	142·08
20	12 30 59·98	0 48 48·2	142·12
21	12 32 47·09	1 3 0·9	142·17
22	12 34 34·26	1 17 13·9	142·18
23	12 36 21·51	S. 1 31 27·0	142·20
	WEDNESDAY 10.		
0	12 38 8·84	S. 1 45 40·2	142·22
1	12 39 56·25	1 59 53·5	142·22
2	12 41 43·75	2 14 6·8	142·20
3	12 43 31·34	2 28 20·0	142·20
4	12 45 19·03	2 42 33·2	142·17
5	12 47 6·81	2 56 46·2	142·13
6	12 48 54·70	3 10 59·0	142·10
7	12 50 42·70	3 25 11·6	142·05
8	12 52 30·80	3 39 23·9	141·98
9	12 54 19·03	3 53 35·8	141·93
10	12 56 7·37	4 7 47·4	141·85
11	12 57 55·84	4 21 58·5	141·77
12	12 59 44·43	4 36 9·1	141·68
13	13 1 33·15	4 50 19·2	141·57
14	13 3 22·01	5 4 28·6	141·47
15	13 5 11·01	5 18 37·4	141·35
16	13 7 0·15	5 32 45·5	141·22
17	13 8 49·44	5 46 52·8	141·07
18	13 10 38·88	6 0 59·2	140·93
19	13 12 28·48	6 15 4·8	140·78
20	13 14 18·24	6 29 9·5	140·60
21	13 16 8·16	6 43 13·1	140·45
22	13 17 58·25	6 57 15·8	140·25
23	13 19 48·51	7 11 17·3	140·05
24	13 21 38·94	S. 7 25 17·6	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 11.		
	h m s	° ′ ″	″
0	13 21 38·94	S. 7 25 17·6	139·85
1	13 23 29·56	7 39 16·7	139·63
2	13 25 20·36	7 53 14·5	139·42
3	13 27 11·34	8 7 11·0	139·18
4	13 29 2·52	8 21 6·1	138·95
5	13 30 53·90	8 34 59·8	138·68
6	13 32 45·48	8 48 51·9	138·43
7	13 34 37·26	9 2 42·5	138·15
8	13 36 29·24	9 16 31·4	137·87
9	13 38 21·44	9 30 18·6	137·58
10	13 40 13·86	9 44 4·1	137·28
11	13 42 6·50	9 57 47·8	136·97
12	13 43 59·36	10 11 29·6	136·65
13	13 45 52·45	10 25 9·5	136·32
14	13 47 45·77	10 38 47·4	135·97
15	13 49 39·33	10 52 23·2	135·62
16	13 51 33·12	11 5 56·9	135·25
17	13 53 27·16	11 19 28·4	134·87
18	13 55 21·45	11 32 57·6	134·50
19	13 57 15·99	11 46 24·6	134·10
20	13 59 10·78	11 59 49·2	133·68
21	14 1 5·83	12 13 11·3	133·27
22	14 3 1·15	12 26 30·9	132·85
23	14 4 56·73	S. 12 39 48·0	132·40
	FRIDAY 12.		
0	14 6 52·58	S. 12 53 2·4	131·95
1	14 8 48·70	13 6 14·1	131·48
2	14 10 45·10	13 19 23·0	131·02
3	14 12 41·79	13 32 29·1	130·53
4	14 14 38·75	13 45 32·3	130·03
5	14 16 36·01	13 58 32·5	129·53
6	14 18 33·56	14 11 29·7	129·02
7	14 20 31·40	14 24 23·8	128·48
8	14 22 29·54	14 37 14·7	127·93
9	14 24 27·99	14 50 2·3	127·38
10	14 26 26·74	15 2 46·6	126·82
11	14 28 25·80	15 15 27·5	126·25
12	14 30 25·17	15 28 5·0	125·65
13	14 32 24·86	15 40 38·9	125·07
14	14 34 24·86	15 53 9·3	124·43
15	14 36 25·19	16 5 35·9	123·83
16	14 38 25·85	16 17 58·9	123·18
17	14 40 26·84	16 30 18·0	122·53
18	14 42 28·15	16 42 33·2	121·87
19	14 44 29·80	16 54 44·4	121·20
20	14 46 31·79	17 6 51·6	120·52
21	14 48 34·12	17 18 54·7	119·80
22	14 50 36·80	17 30 53·5	119·10
23	14 52 39·82	17 42 48·1	118·38
24	14 54 43·19	S. 17 54 38·4	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 13.		
	h m s	° ′ ″	″
0	14 54 43·19	S. 17 54 38·4	117·63
1	14 56 46·91	18 6 24·2	116·90
2	14 58 50·99	18 18 5·6	116·13
3	15 0 55·42	18 29 42·4	115·35
4	15 3 0·22	18 41 14·5	114·57
5	15 5 5·38	18 52 41·9	113·77
6	15 7 10·90	19 4 4·5	112·95
7	15 9 16·79	19 15 22·2	112·13
8	15 11 23·05	19 26 35·0	111·28
9	15 13 29·68	19 37 42·7	110·43
10	15 15 36·68	19 48 45·3	109·57
11	15 17 44·06	19 59 42·7	108·70
12	15 19 51·81	20 10 34·9	107·80
13	15 21 59·94	20 21 21·7	106·90
14	15 24 8·46	20 32 3·1	105·97
15	15 26 17·35	20 42 38·9	105·05
16	15 28 26·63	20 53 9·2	104·10
17	15 30 36·30	21 3 33·8	103·13
18	15 32 46·35	21 13 52·6	102·17
19	15 34 56·79	21 24 5·6	101·18
20	15 37 7·62	21 34 12·7	100·18
21	15 39 18·84	21 44 13·8	99·17
22	15 41 30·45	21 54 8·8	98·13
23	15 43 42·45	S. 22 3 57·6	97·10
	SUNDAY 14.		
0	15 45 54·84	S. 22 13 40·2	96·05
1	15 48 7·63	22 23 16·5	94·97
2	15 50 20·81	22 32 46·3	93·90
3	15 52 34·38	22 42 9·7	92·80
4	15 54 48·35	22 51 26·5	91·70
5	15 57 2·71	23 0 36·7	90·57
6	15 59 17·47	23 9 40·1	89·43
7	16 1 32·62	23 18 36·7	88·30
8	16 3 48·16	23 27 26·5	87·12
9	16 6 4·10	23 36 9·2	85·95
10	16 8 20·43	23 44 44·9	84·77
11	16 10 37·15	23 53 13·5	83·55
12	16 12 54·26	24 1 34·8	82·35
13	16 15 11·77	24 9 48·9	81·10
14	16 17 29·66	24 17 55·5	79·87
15	16 19 47·94	24 25 54·7	78·62
16	16 22 6·61	24 33 46·4	77·33
17	16 24 25·66	24 41 30·4	76·07
18	16 26 45·10	24 49 6·8	74·75
19	16 29 4·91	24 56 35·3	73·45
20	16 31 25·11	25 3 56·0	72·13
21	16 33 45·68	25 11 8·8	70·80
22	16 36 6·62	25 18 13·6	69·43
23	16 38 27·94	25 25 10·2	68·08
24	16 40 49·63	S. 25 31 58·7	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 15.		
	h m s	° ′ ″	″
0	16 40 49·63	S. 25 31 58·7	66·70
1	16 43 11·69	25 38 38·9	65·32
2	16 45 34·11	25 45 10·8	63·93
3	16 47 56·89	25 51 34·4	62·50
4	16 50 20·03	25 57 49·4	61·08
5	16 52 43·52	26 3 55·9	59·63
6	16 55 7·37	26 9 53·7	58·20
7	16 57 31·56	26 15 42·9	56·73
8	16 59 56·09	26 21 23·3	55·27
9	17 2 20·97	26 26 54·9	53·78
10	17 4 46·17	26 32 17·6	52·27
11	17 7 11·71	26 37 31·2	50·78
12	17 9 37·58	26 42 35·9	49·25
13	17 12 3·77	26 47 31·4	47·73
14	17 14 30·28	26 52 17·8	46·18
15	17 16 57·10	26 56 54·9	44·63
16	17 19 24·23	27 1 22·7	43·08
17	17 21 51·65	27 5 41·2	41·48
18	17 24 19·38	27 9 50·1	39·92
19	17 26 47·39	27 13 49·6	38·33
20	17 29 15·70	27 17 39·6	36·72
21	17 31 44·28	27 21 19·9	35·10
22	17 34 13·13	27 24 50·5	33·48
23	17 36 42·25	S. 27 28 11·4	31·85
	TUESDAY 16.		
0	17 39 11·63	S. 27 31 22·5	30·22
1	17 41 41·27	27 34 23·8	28·55
2	17 44 11·16	27 37 15·1	26·90
3	17 46 41·29	27 39 56·5	25·23
4	17 49 11·66	27 42 27·9	23·55
5	17 51 42·25	27 44 49·2	21·88
6	17 54 13·07	27 47 0·5	20·17
7	17 56 44·09	27 49 1·5	18·48
8	17 59 15·33	27 50 52·4	16·78
9	18 1 46·77	27 52 33·1	15·07
10	18 4 18·40	27 54 3·5	13·35
11	18 6 50·22	27 55 23·6	11·62
12	18 9 22·21	27 56 33·3	9·88
13	18 11 54·38	27 57 32·6	8·15
14	18 14 26·71	27 [illegible]	[illegible]42
15	18 16 59·19	27 [illegible]	[illegible]
16	18 19 31·83	27 [illegible]	
17	18 22 4·60		
18	18 24 37·[illegible]		
19	18 27 10		
20	18 29		
21	18 32		
22	18 34		
23	18 37		
24	18 3[illegible]		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 17.		
	h m s	° ′ ″	″
0	18 39 57·25	S. 27 56 50·5	11·27
1	18 42 30·85	27 55 42·9	13·07
2	18 45 4·52	27 54 24·5	14·83
3	18 47 38·25	27 52 55·5	16·63
4	18 50 12·03	27 51 15·7	18·43
5	18 52 45·85	27 49 25·1	20·22
6	18 55 19·71	27 47 23·8	22·00
7	18 57 53·60	27 45 11·8	23·80
8	19 0 27·50	27 42 49·0	25·60
9	19 3 1·41	27 40 15·4	27·38
10	19 5 35·33	27 37 31·1	29·18
11	19 8 9·24	27 34 36·0	30·97
12	19 10 43·13	27 31 30·2	32·77
13	19 13 17·01	27 28 13·6	34·55
14	19 15 50·86	27 24 46·3	36·35
15	19 18 24·66	27 21 8·2	38·12
16	19 20 58·42	27 17 19·5	39·92
17	19 23 32·13	27 13 20·0	41·68
18	19 26 5·78	27 9 9·9	43·47
19	19 28 39·36	27 4 49·1	45·25
20	19 31 12·87	27 0 17·6	47·00
21	19 33 46·29	26 55 35·6	48·78
22	19 36 19·63	26 50 42·9	50·53
23	19 38 52·87	S. 26 45 39·7	52·30
	THURSDAY 18.		
0	19 41 26·00	S. 26 40 25·9	54·05
1	19 43 59·02	26 35 1·6	55·80
2	19 46 31·93	26 29 26·8	57·53
3	19 49 4·71	26 23 41·6	59·28
4	19 51 37·36	26 17 45·9	61·00
5	19 54 9·87	26 11 39·9	62·73
6	19 56 42·24	26 5 23·5	64·45
7	19 59 14·46	25 58 56·8	66·17
8	20 1 46·53	25 52 19·8	67·87
9	20 4 18·43	25 45 32·6	69·57
10	20 6 50·16	25 38 35·2	71·25
11	20 9 21·73	25 31 27·7	72·93
12	20 11 53·11	25 24 10·1	74·62
13	20 14 24·31	25 16 42·4	76·28
14	20 16 55·32	25 9 4·7	77·93
15	20 19 26·14	25 1 17·1	79·58
16	20 21 56·75	24 53 19·6	81·22
17	20 24 27·17	24 45 12·3	82·85
18	20 26 57·37	24 36 55·2	84·47
19	20 29 27·37	24 28 28·4	86·08
20	20 31 57·15	24 19 51·9	87·67
21	20 34 26·70	24 11 5·9	89·27
22	20 36 56·03	24 2 10·3	90·85
23	20 39 25·14	23 53 5·2	92·42
24	20 41 54·01	S. 23 43 50·7	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 19.		
	h m s	° ′ ″	″
0	20 41 54·01	S. 23 43 50·7	93·97
1	20 44 22·65	23 34 26·9	95·52
2	20 46 51·05	23 24 53·8	97·03
3	20 49 19·20	23 15 11·6	98·58
4	20 51 47·11	23 5 20·2	100·07
5	20 54 14·78	22 55 19·7	101·58
6	20 56 42·19	22 45 10·2	103·07
7	20 59 9·35	22 34 51·8	104·53
8	21 1 36·26	22 24 24·6	106·00
9	21 4 2·92	22 13 48·6	107·47
10	21 6 29·31	22 3 3·8	108·88
11	21 8 55·44	21 52 10·5	110·32
12	21 11 21·31	21 41 8·6	111·73
13	21 13 46·92	21 29 58·2	113·12
14	21 16 12·26	21 18 39·5	114·52
15	21 18 37·33	21 7 12·4	115·88
16	21 21 2·14	20 55 37·1	117·23
17	21 23 26·68	20 43 53·7	118·58
18	21 25 50·95	20 32 2·2	119·90
19	21 28 14·96	20 20 2·8	121·23
20	21 30 38·69	20 7 55·4	122·52
21	21 33 2·16	19 55 40·3	123·82
22	21 35 25·35	19 43 17·4	125·08
23	21 37 48·28	S. 19 30 46·9	126·33
	SATURDAY 20.		
0	21 40 10·93	S. 19 18 8·9	127·58
1	21 42 33·32	19 5 23·4	128·80
2	21 44 55·44	18 52 30·6	130·02
3	21 47 17·29	18 39 30·5	131·22
4	21 49 38·87	18 26 23·2	132·38
5	21 52 0·19	18 13 8·9	133·57
6	21 54 21·25	17 59 47·5	134·70
7	21 56 42·04	17 46 19·3	135·85
8	21 59 2·57	17 32 44·2	136·97
9	22 1 22·84	17 19 2·4	138·07
10	22 3 42·85	17 5 14·0	139·15
11	22 6 2·60	16 51 19·1	140·22
12	22 8 22·09	16 37 17·8	141·28
13	22 10 41·33	16 23 10·1	142·32
14	22 13 0·32	16 8 56·2	143·33
15	22 15 19·05	15 54 36·2	144·35
16	22 17 37·55	15 40 10·1	145·33
17	22 19 55·79	15 25 38·1	146·32
18	22 22 13·79	15 11 0·2	147·27
19	22 24 31·55	14 56 16·6	148·22
20	22 26 49·07	14 41 27·3	149·13
21	22 29 6·36	14 26 32·5	150·03
22	22 31 23·41	14 11 32·3	150·93
23	22 33 40·23	13 56 26·7	151·82
24	22 35 56·83	S. 13 41 15·8	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 21.		
	h m s	° ′ ″	″
0	22 35 56·83	S. 13 41 15·8	152·67
1	22 38 13·20	13 25 59·8	153·50
2	22 40 29·35	13 10 38·8	154·33
3	22 42 45·29	12 55 12·8	155·13
4	22 45 1·01	12 39 42·0	155·93
5	22 47 16·52	12 24 6·4	156·70
6	22 49 31·81	12 8 26·2	157·45
7	22 51 46·91	11 52 41·5	158·20
8	22 54 1·80	11 36 52·3	158·92
9	22 56 16·50	11 20 58·8	159·62
10	22 58 31·00	11 5 1·1	160·32
11	23 0 45·32	10 48 59·2	160·97
12	23 2 59·44	10 32 53·4	161·63
13	23 5 13·38	10 16 43·6	162·25
14	23 7 27·15	10 0 30·1	162·88
15	23 9 40·75	9 44 12·8	163·48
16	23 11 54·17	9 27 51·9	164·05
17	23 14 7·43	9 11 27·6	164·63
18	23 16 20·53	8 54 59·8	165·17
19	23 18 33·47	8 38 28·8	165·68
20	23 20 46·26	8 21 54·7	166·22
21	23 22 58·89	8 5 17·4	166·70
22	23 25 11·38	7 48 37·2	167·17
23	23 27 23·73	S. 7 31 54·2	167·63
	MONDAY 22.		
0	23 29 35·95	S. 7 15 8·4	168·07
1	23 31 48·03	6 58 20·0	168·48
2	23 33 59·99	6 41 29·1	168·90
3	23 36 11·83	6 24 35·7	169·28
4	23 38 23·55	6 7 40·0	169·63
5	23 40 35·15	5 50 42·2	170·00
6	23 42 46·64	5 33 42·2	170·33
7	23 44 58·03	5 16 40·2	170·63
8	23 47 9·32	4 59 36·4	170·93
9	23 49 20·52	4 42 30·8	171·22
10	23 51 31·62	4 25 23·5	171·47
11	23 53 42·64	4 8 14·7	171·72
12	23 55 53·57	3 51 4·4	171·93
13	23 58 4·43	3 33 52·8	172·15
14	0 0 15·21	3 16 39·9	172·32
15	0 2 25·93	2 59 26·0	172·50
16	0 4 36·58	2 42 11·0	172·65
17	0 6 47·17	2 24 55·1	172·78
18	0 8 57·72	2 7 38·4	172·90
19	0 11 8·21	1 50 21·0	173·00
20	0 13 18·65	1 33 3·0	173·07
21	0 15 29·06	1 15 44·6	173·13
22	0 17 39·43	0 58 25·8	173·18
23	0 19 49·77	0 41 6·7	173·20
24	0 22 0·09	S. 0 23 47·5	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 23.		
	h m s	° ′ ″	″
0	0 22 0·09	S. 0 23 47·5	173·22
1	0 24 10·39	S. 0 6 28·2	173·18
2	0 26 20·67	N. 0 10 50·9	173·17
3	0 28 30·93	0 28 9·9	173·13
4	0 30 41·20	0 45 28·7	173·05
5	0 32 51·45	1 2 47·0	172·97
6	0 35 1·71	1 20 4·8	172·87
7	0 37 11·98	1 37 22·0	172·73
8	0 39 22·26	1 54 38·4	172·62
9	0 41 32·56	2 11 54·1	172·45
10	0 43 42·87	2 29 8·8	172·27
11	0 45 53·21	2 46 22·4	172·08
12	0 48 3·58	3 3 34·9	171·87
13	0 50 13·99	3 20 46·1	171·63
14	0 52 24·43	3 37 55·9	171·40
15	0 54 34·92	3 55 4·3	171·12
16	0 56 45·45	4 12 11·0	170·83
17	0 58 56·04	4 29 16·0	170·55
18	1 1 6·68	4 46 19·3	170·22
19	1 3 17·39	5 3 20·6	169·88
20	1 5 28·16	5 20 19·9	169·53
21	1 7 39·00	5 37 17·1	169·15
22	1 9 49·91	5 54 12·0	168·77
23	1 12 0·90	N. 6 11 4·6	168·37
	WEDNESDAY 24.		
0	1 14 11·97	N. 6 27 54·8	167·93
1	1 16 23·13	6 44 42·4	167·50
2	1 18 34·37	7 1 27·4	167·03
3	1 20 45·71	7 18 9·6	166·55
4	1 22 57·15	7 34 48·9	166·07
5	1 25 8·69	7 51 25·3	165·55
6	1 27 20·33	8 7 58·6	165·00
7	1 29 32·09	8 24 28·6	164·47
8	1 31 43·95	8 40 55·4	163·90
9	1 33 55·94	8 57 18·8	163·32
10	1 36 8·05	9 13 38·7	162·72
11	1 38 20·28	9 29 55·0	162·10
12	1 40 32·63	9 46 7·6	161·47
13	1 42 45·12	10 2 16·4	160·80
14	1 44 57·75	10 18 21·2	160·13
15	1 47 10·51	10 34 22·0	159·45
16	1 49 23·42	10 50 18·7	158·75
17	1 51 36·47	11 6 11·2	15[illegible]
18	1 53 49·66	11 21 59·4	
19	1 56 3·01	11 37 43·2	
20	1 58 16·51	11 53 22·[illegible]	
21	2 0 30·16	12 8 57	
22	2 2 43·98	12 24 2[illegible]	
23	2 4 57·95	12 39 5	
24	2 7 12·09	N. 12 55 1	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 25.		
	h m s	° ′ ″	″
0	2 7 12·09	N.12 55 12·1	152·53
1	2 9 26·39	13 10 27·3	151·67
2	2 11 40·86	13 25 37·3	150·80
3	2 13 55·51	13 40 42·1	149·93
4	2 16 10·33	13 55 41·7	149·02
5	2 18 25·32	14 10 35·8	148·10
6	2 20 40·49	14 25 24·4	147·18
7	2 22 55·84	14 40 7·5	146·22
8	2 25 11·38	14 54 44·8	145·27
9	2 27 27·10	15 9 16·4	144·28
10	2 29 43·00	15 23 42·1	143·30
11	2 31 59·10	15 38 1·9	142·28
12	2 34 15·38	15 52 15·6	141·27
13	2 36 31·85	16 6 23·2	140·22
14	2 38 48·52	16 20 24·5	139·17
15	2 41 5·38	16 34 19·5	138·10
16	2 43 22·43	16 48 8·1	137·02
17	2 45 39·68	17 1 50·2	135·92
18	2 47 57·13	17 15 25·7	134·80
19	2 50 14·77	17 28 54·5	133·68
20	2 52 32·61	17 42 16·6	132·53
21	2 54 50·64	17 55 31·8	131·40
22	2 57 8·88	18 8 40·2	130·22
23	2 59 27·32	N.18 21 41·5	129·03
	FRIDAY 26.		
0	3 1 45·95	N.18 34 35·7	127·85
1	3 4 4·79	18 47 22·8	126·63
2	3 6 23·82	19 0 2·6	125·42
3	3 8 43·05	19 12 35·1	124·18
4	3 11 2·48	19 25 0·2	122·93
5	3 13 22·11	19 37 17·8	121·67
6	3 15 41·93	19 49 27·8	120·40
7	3 18 1·95	20 1 30·2	119·12
8	3 20 22·17	20 13 24·9	117·82
9	3 22 42·59	20 25 11·8	116·52
10	3 25 3·19	20 36 50·9	115·18
11	3 27 24·00	20 48 22·0	113·87
12	3 29 44·99	20 59 45·2	112·52
13	3 32 6·17	21 11 0·3	111·15
14	3 34 27·54	21 22 7·2	109·80
15	3 36 49·10	21 33 6·0	108·42
16	3 39 10·85	21 43 56·5	107·02
17	3 41 32·77	21 54 38·6	105·63
18	3 43 54·88	22 5 12·4	104·22
19	3 46 17·16	22 15 37·7	102·80
20	3 48 39·62	22 25 54·5	101·37
21	3 51 2·26	22 36 2·7	99·93
22	3 53 25·07	22 46 2·3	98·48
23	3 55 48·04	22 55 53·2	97·02
24	*3 58 11·18*	N.23 5 35·3	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 27.		
	h m s	° ′ ″	″
0	3 58 11·18	N.23 5 35·3	95·55
1	4 0 34·48	23 15 8·6	94·08
2	4 2 57·94	23 24 33·1	92·60
3	4 5 21·56	23 33 48·7	91·10
4	4 7 45·33	23 42 55·3	89·60
5	4 10 9·25	23 51 52·9	88·10
6	4 12 33·32	24 0 41·5	86·58
7	4 14 57·52	24 9 21·0	85·05
8	4 17 21·86	24 17 51·3	83·52
9	4 19 46·34	24 26 12·4	82·00
10	4 22 10·95	24 34 24·4	80·43
11	4 24 35·68	24 42 27·0	78·90
12	4 27 0·53	24 50 20·4	77·33
13	4 29 25·50	24 58 4·4	75·78
14	4 31 50·58	25 5 39·1	74·20
15	4 34 15·77	25 13 4·3	72·63
16	4 36 41·05	25 20 20·1	71·07
17	4 39 6·44	25 27 26·5	69·47
18	4 41 31·92	25 34 23·3	67·88
19	4 43 57·48	25 41 10·6	66·28
20	4 46 23·12	25 47 48·3	64·68
21	4 48 48·84	25 54 16·4	63·10
22	4 51 14·64	26 0 35·0	61·48
23	4 53 40·49	N.26 6 43·9	59·87
	SUNDAY 28.		
0	4 56 6·41	N.26 12 43·1	58·25
1	4 58 32·38	26 18 32·6	56·65
2	5 0 58·40	26 24 12·5	55·02
3	5 3 24·47	26 29 42·6	53·40
4	5 5 50·57	26 35 3·0	51·78
5	5 8 16·70	26 40 13·7	50·15
6	5 10 42·85	26 45 14·6	48·53
7	5 13 9·03	26 50 5·8	46·90
8	5 15 35·21	26 54 47·2	45·27
9	5 18 1·41	26 59 18·8	43·65
10	5 20 27·60	27 3 40·7	42·00
11	5 22 53·79	27 7 52·7	40·38
12	5 25 19·97	27 11 55·0	38·75
13	5 27 46·13	27 15 47·5	37·12
14	5 30 12·26	27 19 30·2	35·48
15	5 32 38·36	27 23 3·1	33·85
16	5 35 4·43	27 26 26·2	32·23
17	5 37 30·45	27 29 39·6	30·60
18	5 39 56·42	27 32 43·2	28·98
19	5 42 22·33	27 35 37·1	27·35
20	5 44 48·18	27 38 21·2	25·72
21	5 47 13·96	27 40 55·5	24·12
22	5 49 39·66	27 43 20·2	22·48
23	5 52 5·29	27 45 35·1	20·87
24	5 54 30·82	N.27 47 40·3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 29.		
	h m s	° ′ ″	″
0	5 54 30·82	N.27 47 40·3	19·27
1	5 56 56·26	27 49 35·9	17·63
2	5 59 21·60	27 51 21·7	16·05
3	6 1 46·82	27 52 58·0	14·43
4	6 4 11·94	27 54 24·6	12·85
5	6 6 36·93	27 55 41·7	11·23
6	6 9 1·80	27 56 49·1	9·67
7	6 11 26·53	27 57 47·1	8·07
8	6 13 51·13	27 58 35·5	6·48
9	6 16 15·58	27 59 14·4	4·90
10	6 18 39·87	27 59 43·8	3·33
11	6 21 4·01	28 0 3·8	1·77
12	6 23 27·99	28 0 14·4	0·20
13	6 25 51·80	28 0 15·6	1·35
14	6 28 15·43	28 0 7·5	2·90
15	6 30 38·88	27 59 50·1	4·45
16	6 33 2·15	27 59 23·4	6·00
17	6 35 25·22	27 58 47·4	7·52
18	6 37 48·09	27 58 2·3	9·03
19	6 40 10·77	27 57 8·1	10·57
20	6 42 33·23	27 56 4·7	12·08
21	6 44 55·48	27 54 52·2	13·57
22	6 47 17·51	27 53 30·8	15·08
23	6 49 39·32	N.27 52 0·3	16·57
	TUESDAY 30.		
0	6 52 0·89	N.27 50 20·9	18·05
1	6 54 22·23	27 48 32·6	19·52
2	6 56 43·34	27 46 35·5	20·98
3	6 59 4·20	27 44 29·6	22·45
4	7 1 24·80	27 42 14·9	23·90
5	7 3 45·16	27 39 51·5	25·35
6	7 6 5·26	27 37 19·4	26·78
7	7 8 25·10	27 34 38·7	28·20
8	7 10 44·68	27 31 49·5	29·62
9	7 13 3·99	27 28 51·8	31·03
10	7 15 23·02	27 25 45·6	32·43
11	7 17 41·78	27 22 31·0	33·83
12	7 20 0·25	27 19 8·0	35·22
13	7 22 18·44	27 15 36·7	36·58
14	7 24 36·34	27 11 57·2	37·95
15	7 26 53·96	27 8 9·5	39·32
16	7 29 11·27	27 4 13·6	40·65
17	7 31 28·29	27 0 9·7	42·00
18	7 33 45·01	26 55 57·7	43·32
19	7 36 1·43	26 51 37·8	44·65
20	7 38 17·55	26 47 9·9	45·95
21	7 40 33·35	26 42 34·2	47·25
22	7 42 48·84	26 37 50·7	48·55
23	7 45 4·02	26 32 59·4	49·82
24	7 47 18·89	N.26 28 0·5	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 31.		
	h m s	° ′ ″	″
0	7 47 18·89	N.26 28 0·5	51·10
1	7 49 33·43	26 22 53·9	52·35
2	7 51 47·66	26 17 39·8	53·60
3	7 54 1·56	26 12 18·2	54·85
4	7 56 15·14	26 6 49·1	56·08
5	7 58 28·39	26 1 12·6	57·30
6	8 0 41·32	25 55 28·8	58·50
7	8 2 53·92	25 49 37·8	59·72
8	8 5 6·19	25 43 39·5	60·92
9	8 7 18·14	25 37 34·0	62·08
10	8 9 29·75	25 31 21·5	63·27
11	8 11 41·03	25 25 1·9	64·42
12	8 13 51·97	25 18 35·4	65·57
13	8 16 2·58	25 12 2·0	66·72
14	8 18 12·85	25 5 21·7	67·85
15	8 20 22·79	24 58 34·6	68·98
16	8 22 32·40	24 51 40·7	70·08
17	8 24 41·67	24 44 40·2	71·18
18	8 26 50·60	24 37 33·1	72·27
19	8 28 59·20	24 30 19·5	73·37
20	8 31 7·47	24 22 59·3	74·42
21	8 33 15·40	24 15 32·8	75·50
22	8 35 22·99	24 7 59·8	76·55
23	8 37 30·25	N.24 0 20·5	77·58
	THURSDAY, NOV. 1.		
0	8 39 37·17	N.23 52 35·0	

PHASES OF THE MOON.

	d	h	m
☾ *Last Quarter* -	2	11	4·4
● New Moon - -	10	15	23·7
☽ *First Quarter* -	18	3	27·9
○ Full Moon -			

☾
☾

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Arietis W.	45 11 11	2852	46 44 31	2862	48 17 38	2873	49 50 31	2884
	Aldebaran W.	15 58 45	3376	17 21 29	3287	18 45 56	3221	20 11 40	3173
	Pollux E.	30 26 19	2734	28 50 25	2752	27 14 54	2769	25 39 45	2786
	Mars E.	58 6 43	2953	56 35 31	2970	55 4 41	2988	53 34 13	3005
	Regulus E.	67 3 24	2743	65 27 41	2760	63 52 20	2776	62 17 21	2793
	Sun E.	106 54 45	3078	105 26 9	3096	103 57 55	3114	102 30 2	3131
2	α Arietis W.	57 31 26	2939	59 2 55	2950	60 34 10	2961	62 5 11	2972
	Aldebaran W.	27 30 43	3068	28 59 32	3061	30 28 30	3058	31 57 31	3056
	Mars E.	46 7 6	3087	44 38 41	3102	43 10 34	3117	41 42 45	3132
	Regulus E.	54 27 41	2871	52 54 45	2885	51 22 7	2899	49 49 47	2913
	Sun E.	95 15 41	3212	93 49 46	3227	92 24 9	3241	90 58 49	3255
3	α Arietis W.	69 37 2	3022	71 6 48	3031	72 36 22	3040	74 5 45	3048
	Aldebaran W.	39 22 41	3064	40 51 34	3068	42 20 23	3072	43 49 7	3076
	Saturn W.	16 58 56	3190	18 25 17	3166	19 52 7	3149	21 19 17	3136
	Mars E.	34 28 2	3202	33 1 55	3215	31 36 4	3228	30 10 28	3241
	Regulus E.	42 12 28	2978	40 41 48	2991	39 11 24	3003	37 41 15	3015
	Sun E.	83 56 4	3319	82 32 15	3331	81 8 39	3341	79 45 15	3352
4	α Arietis W.	81 30 12	3087	82 58 38	3092	84 26 57	3099	85 55 8	3105
	Aldebaran W.	51 11 29	3097	52 39 42	3101	54 7 50	3105	55 35 54	3109
	Saturn W.	28 37 40	3114	30 5 32	3113	31 33 26	3114	33 1 19	3114
	Regulus E.	30 14 9	3074	28 45 27	3085	27 16 59	3097	25 48 46	3111
	Sun E.	72 51 5	3397	71 28 45	3404	70 6 33	3411	68 44 29	3417
5	Aldebaran W.	62 55 13	3123	64 22 55	3124	65 50 35	3126	67 18 13	3128
	Saturn W.	40 20 36	3117	41 48 25	3118	43 16 13	3119	44 44 0	3119
	Pollux W.	18 36 23	3079	20 4 58	3080	21 33 32	3082	23 2 3	3083
	Sun E.	61 55 50	3443	60 34 22	3447	59 12 59	3451	57 51 40	3453
6	Aldebaran W.	74 36 5	3130	76 3 38	3130	77 31 11	3129	78 58 45	3128
	Saturn W.	52 2 56	3117	53 30 45	3116	54 58 35	3115	56 26 26	3113
	Pollux W.	30 24 23	3086	31 52 50	3087	33 21 16	3086	34 49 43	3085
	Sun E.	51 5 41	3461	49 44 33	3462	48 23 26	3462	47 2 20	3461
7	Aldebaran W.	86 17 0	3119	87 44 46	3118	89 12 34	3115	90 40 26	3111
	Saturn W.	63 46 18	3101	65 14 26	3099	66 42 37	3096	68 10 52	3092
	Pollux W.	42 12 21	3076	43 41 0	3074	45 9 42	3071	46 38 27	3068
	Sun E.	40 16 31	3454	38 55 16	3452	37 33 58	3450	36 12 38	3447
13	Sun W.	26 56 16	3130	28 23 49	3119	29 51 35	3110	31 19 32	3101
	α Aquilæ E.	76 1 43	3686	74 44 41	3692	73 27 45	3699	72 10 57	3708
	Jupiter E.	96 16 29	2774	94 41 27	2766	93 6 14	2757	91 30 50	2749
	Fomalhaut E.	103 50 7	2962	102 19 7	2952	100 47 54	2942	99 16 28	2931
14	Sun W.	38 42 12	3053	40 11 19	3043	41 40 39	3034	43 10 10	3025
	α Aquilæ E.	65 49 52	3779	64 34 28	3800	63 19 26	3823	62 4 48	3849
	Jupiter E.	83 31 5	2707	81 54 34	2699	80 17 52	2690	78 40 59	2681
	Fomalhaut E.	91 36 11	2885	90 3 33	2876	88 30 43	2866	86 57 41	2859
15	Sun W.	50 40 53	2973	52 11 39	2963	53 42 38	2953	55 13 50	2942
	α Aquilæ E.	55 59 21	4031	54 48 12	4081	53 37 52	4136	52 28 25	4197
	Jupiter E.	70 33 35	2637	68 55 31	2628	67 17 14	2619	65 38 45	2610

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	α Arietis W.	51 23 11	2895	52 55 36	2906	54 27 47	2917	55 59 44	2929
	Aldebaran W.	21 38 22	3137	23 5 47	3110	24 33 44	3091	26 2 5	3077
	Pollux E.	24 4 59	2803	22 30 35	2820	20 56 33	2836	19 22 52	2853
	Mars E.	52 4 7	3022	50 34 21	3039	49 4 56	3055	47 35 51	3071
	Regulus E.	60 42 44	2809	59 8 28	2825	57 34 32	2841	56 0 57	2856
	Sun E.	101 2 30	3148	99 35 19	3164	98 8 27	3181	96 41 55	3196
2	α Arietis W.	63 35 59	2982	65 6 34	2993	66 36 56	3003	68 7 5	3013
	Aldebaran W.	33 26 35	3055	34 55 40	3056	36 24 43	3058	37 53 44	3061
	Mars E.	40 15 14	3147	38 48 1	3161	37 21 5	3174	35 54 25	3188
	Regulus E.	48 17 45	2927	46 46 1	2940	45 14 33	2954	43 43 22	2967
	Sun E.	89 33 45	3269	88 8 57	3282	86 44 25	3294	85 20 7	3307
3	α Arietis W.	75 34 58	3057	77 4 0	3065	78 32 53	3072	80 1 37	3079
	Aldebaran W.	45 17 46	3081	46 46 19	3084	48 14 48	3089	49 43 11	3093
	Saturn W.	22 46 43	3128	24 14 18	3122	25 42 1	3118	27 9 49	3115
	Mars E.	28 45 7	3254	27 20 2	3268	25 55 13	3281	24 30 39	3294
	Regulus E.	36 11 21	3027	34 41 42	3038	33 12 16	3050	31 43 5	3062
	Sun E.	78 22 4	3361	76 59 3	3371	75 36 14	3380	74 13 35	3388
4	α Arietis W.	87 23 12	3110	88 51 10	3115	90 19 2	3120	91 46 47	3124
	Aldebaran W.	57 3 53	3112	58 31 48	3115	59 59 40	3118	61 27 28	3120
	Saturn W.	34 29 12	3114	35 57 5	3115	37 24 56	3115	38 52 47	3117
	Regulus E.	24 20 50	3125	22 53 11	3140	21 25 50	3157	19 58 50	3177
	Sun E.	67 22 32	3424	66 0 43	3430	64 39 0	3434	63 17 22	3439
5	Aldebaran W.	68 45 49	3129	70 13 24	3129	71 40 58	3129	73 8 32	3130
	Saturn W.	46 11 47	3119	47 39 34	3119	49 7 21	3119	50 35 8	3118
	Pollux W.	24 30 33	3084	25 59 2	3085	27 27 30	3086	28 55 57	3087
	Sun E.	56 30 23	3456	55 9 10	3457	53 47 58	3460	52 26 49	3461
6	Aldebaran W.	80 26 21	3127	81 53 58	3126	83 21 36	3124	84 49 17	3122
	Saturn W.	57 54 20	3112	59 22 15	3110	60 50 13	3107	62 18 14	3105
	Pollux W.	36 18 11	3083	37 46 41	3082	39 15 12	3080	40 43 46	3079
	Sun E.	45 41 12	3461	44 20 4	3460	42 58 55	3458	41 37 44	3456
7	Aldebaran W.	92 8 22	3109	93 36 21	3105	95 4 24	3102	96 32 31	3098
	Saturn W.	69 39 11	3088	71 7 35	3084	72 36 4	3080	74 4 38	3076
	Pollux W.	48 7 16	3065	49 36 9	3061	51 5 6	3056	52 34 9	3053
	Sun E.	34 51 14	3443	33 29 46	3440	32 8 15	3436	30 46 39	3432
13	Sun W.	32 47 40	3091	34 16 1	3082	35 44 33	3072	37 13 17	3063
	α Aquilæ E.	70 54 18	3718	69 37 50	3730	68 21 35	3745	67 5 35	3761
	Jupiter E.	89 55 15	2741	88 19 29	2732	86 43 32	2724	85 7 24	2716
	Fomalhaut E.	97 44 49	2922	96 12 58	2912	94 40 55	2902	93 8 39	2893
14	Sun W.	44 39 54	3014	46 9 50	3004	47 39 58	2993	49 10 19	2983
	α Aquilæ E.	60 50 36	3878	59 36 54	3911	58 23 45	3947	57 11 13	3987
	Jupiter E.	77 3 54	2672	75 26 37	2663	73 49 8	2655	72 11 28	2646
	Fomalhaut E.	85 24 29	2851	83 51 7	2842	82 17 34	2835	80 43 51	2827
15	Sun W.	56 45 16	2932	58 16 54	2921	59 48 46	2910	61 20 52	2900
	α Aquilæ E.	51 19 56	4264	50 12 30	4338	49 6 12	4422	48 1 11	4515
	Jupiter E.	64 0 3	2601	62 21 9	2592	60 42 3	2582	59 2 43	2573

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
15	Fomalhaut E.	79 9 58	2820	77 35 56	2813	76 1 45	2806	74 27 25	2800
	α Pegasi E.	99 51 39	2997	98 21 23	2985	96 50 51	2973	95 20 5	2961
16	Sun W.	62 53 11	2889	64 25 44	2878	65 58 31	2867	67 31 32	2856
	Antares W.	17 35 15	2569	19 14 52	2557	20 54 46	2545	22 34 57	2533
	Jupiter E.	57 23 11	2564	55 43 26	2554	54 3 28	2545	52 23 18	2535
	Fomalhaut E.	66 33 49	2773	64 58 46	2769	63 23 37	2766	61 48 24	2763
	α Pegasi E.	87 42 46	2911	86 10 41	2902	84 38 25	2894	83 5 58	2887
17	Sun W.	75 20 14	2800	76 54 42	2788	78 29 26	2776	80 4 25	2765
	Antares W.	30 59 52	2477	32 41 38	2465	34 23 40	2454	36 5 58	2443
	Jupiter E.	43 59 8	2489	42 17 39	2480	40 35 58	2471	38 54 4	2462
	Fomalhaut E.	53 51 44	2761	52 16 25	2764	50 41 10	2769	49 6 1	2775
	α Pegasi E.	75 21 34	2857	73 48 20	2853	72 15 1	2850	70 41 38	2848
18	Sun W.	88 3 8	2707	89 39 39	2695	91 16 25	2683	92 53 28	2672
	Antares W.	44 41 24	2387	46 25 17	2377	48 9 25	2366	49 53 49	2355
	Jupiter E.	30 21 35	2424	28 38 34	2417	26 55 24	2412	25 12 7	2409
	α Pegasi E.	62 54 25	2852	61 21 5	2858	59 47 52	2865	58 14 48	2873
	α Arietis E.	103 43 0	2450	102 0 37	2439	100 17 58	2428	98 35 3	2417
19	Sun W.	101 2 31	2615	102 41 6	2604	104 19 56	2593	105 59 1	2582
	Antares W.	58 39 45	2301	60 25 43	2291	62 11 56	2281	63 58 24	2270
	α Pegasi E.	50 33 6	2953	49 1 54	2978	47 31 14	3009	46 1 12	3044
	α Arietis E.	89 56 27	2362	88 11 58	2352	86 27 14	2342	84 42 16	2332
20	Sun W.	114 18 4	2530	115 58 35	2521	117 39 19	2512	119 20 16	2503
	Antares W.	72 54 24	2222	74 42 18	2214	76 30 25	2204	78 18 46	2196
	α Arietis E.	75 54 0	2288	74 7 43	2281	72 21 16	2273	70 34 37	2267
	Aldebaran E.	106 10 57	2271	104 24 15	2262	102 37 19	2252	100 50 9	2243
21	Sun W.	127 47 59	2463	129 30 4	2456	131 12 19	2450	132 54 42	2444
	Antares W.	87 23 28	2159	89 12 57	2153	91 2 35	2147	92 52 23	2142
	α Aquilæ W.	48 8 43	3991	49 20 31	3884	50 34 7	3788	51 49 22	3699
	α Arietis E.	61 39 9	2241	59 51 42	2238	58 4 11	2235	56 16 36	2233
	Aldebaran E.	91 51 12	2205	90 2 52	2198	88 14 22	2192	86 25 43	2187
	Saturn E.	114 18 47	2178	112 29 46	2171	110 40 34	2164	108 51 12	2158
22	α Aquilæ W.	58 26 31	3367	59 49 25	3319	61 13 15	3274	62 37 57	3234
	Jupiter W.	27 28 37	2165	29 17 57	2157	31 7 29	2152	32 57 9	2147
	α Arietis E.	47 18 33	2241	45 31 6	2246	43 43 47	2253	41 56 38	2262
	Aldebaran E.	77 20 45	2169	75 31 30	2167	73 42 13	2166	71 52 54	2165
	Saturn E.	99 42 22	2135	97 52 16	2133	96 2 7	2130	94 11 53	2128
23	α Aquilæ W.	69 51 49	3089	71 20 12	3069	72 48 59	3053	74 18 6	3039
	Jupiter W.	42 6 48	2138	43 56 50	2138	45 46 51	2139	47 36 51	2141
	Fomalhaut W.	37 8 59	2629	38 47 14	2591	40 26 21	2558	42 6 13	2531
	Aldebaran E.	62 46 27	2174	60 57 20	2177	59 8 18	2182	57 19 24	2188
	Saturn E.	85 0 22	2128	83 10 5	2130	81 19 52	2132	79 29 42	2135
	Pollux E.	106 30 42	2114	104 40 5	2116	102 49 30	2118	100 58 59	2121
24	Jupiter W.	56 45 39	2162	58 35 4	2168	60 24 19	2175	62 13 25	2182
	Fomalhaut W.	50 33 17	2449	52 15 42	2440	53 58 20	2434	55 41 6	2430
	α Pegasi W.	34 28 27	3471	35 49 23	3364	37 12 21	3272	38 37 5	3193

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
15	Fomalhaut E.	72 52 57	2794	71 18 21	2788	69 43 37	2782	68 8 46	2778
	α Pegasi E.	93 49 4	2950	92 17 48	2940	90 46 20	2930	89 14 39	2920
16	Sun W.	69 4 47	2845	70 38 17	2834	72 12 1	2822	73 46 0	2811
	Antares W.	24 15 24	2522	25 56 7	2510	27 37 6	2499	29 18 21	2487
	Jupiter E.	50 42 54	2526	49 2 17	2517	47 21 27	2507	45 40 24	2498
	Fomalhaut E.	60 13 7	2761	58 37 48	2759	57 2 26	2759	55 27 5	2759
	α Pegasi E.	81 33 22	2880	80 0 37	2873	78 27 43	2867	76 54 42	2862
17	Sun W.	81 39 39	2753	83 15 8	2742	84 50 52	2730	86 26 52	2718
	Antares W.	37 48 32	2432	39 31 21	2421	41 14 26	2410	42 57 47	2398
	Jupiter E.	37 11 57	2454	35 29 39	2445	33 47 8	2438	32 4 27	2430
	Fomalhaut E.	47 31 1	2783	45 56 11	2794	44 21 35	2808	42 47 17	2823
	α Pegasi E.	69 8 12	2846	67 34 44	2846	66 1 16	2847	64 27 49	2849
18	Sun W.	94 30 45	2660	96 8 18	2649	97 46 7	2637	99 24 11	2626
	Antares W.	51 38 29	2344	53 23 25	2333	55 8 36	2322	56 54 3	2312
	Jupiter E.	23 28 45	2407	21 45 20	2407	20 1 55	2410	18 18 35	2419
	α Pegasi E.	56 41 54	2883	55 9 14	2896	53 36 50	2912	52 4 46	2931
	α Arietis E.	96 51 52	2405	95 8 24	2394	93 24 41	2383	91 40 42	2372
19	Sun W.	107 38 21	2572	109 17 55	2561	110 57 44	2551	112 37 47	2540
	Antares W.	65 45 7	2260	67 32 5	2251	69 19 17	2241	71 6 43	2231
	α Pegasi E.	44 31 54	3084	43 3 25	3133	41 35 55	3188	40 9 31	3252
	α Arietis E.	82 57 3	2323	81 11 37	2314	79 25 58	2304	77 40 5	2296
20	Sun W.	121 1 25	2494	122 42 46	2485	124 24 20	2478	126 6 4	2470
	Antares W.	80 7 19	2188	81 56 4	2180	83 45 1	2173	85 34 9	2166
	α Arietis E.	68 47 49	2260	67 0 51	2254	65 13 44	2249	63 26 30	2245
	Aldebaran E.	99 2 46	2235	97 15 10	2227	95 27 22	2219	93 39 23	2211
21	Sun W.	134 37 14	2438	136 19 54	2433	138 2 41	2429	139 45 35	2425
	Antares W.	94 42 18	2136	96 32 22	2132	98 22 33	2128	100 12 50	2124
	α Aquilæ W.	53 6 10	3620	54 24 23	3547	55 43 55	3482	57 4 39	3422
	α Arietis E.	54 28 58	2233	52 41 20	2233	50 53 41	2235	49 6 5	2237
	Aldebaran E.	84 36 56	2182	82 48 2	2178	80 59 2	2174	79 9 56	2171
	Saturn E.	107 1 42	2153	105 12 3	2147	103 22 16	2143	101 32 22	2139
22	α Aquilæ W.	64 3 26	3198	65 29 38	3166	66 56 28	3137	68 23 53	3111
	Jupiter W.	34 46 56	2143	36 36 50	2141	38 26 47	2139	40 16 47	2138
	α Arietis E.	40 9 42	2272	38 23 2	2285	36 36 41	2301	34 50 43	2320
	Aldebaran E.	70 3 34	2165	68 14 14	2166	66 24 56	2168	64 35 40	2170
	Saturn E.	92 21 36	2127	90 31 18	2126	88 40 59	2126	86 50 40	2127
23	α Aquilæ W.	75 47 30	3028	77 17 8	3018	78 46 58	3012	80 16 56	3008
	Jupiter W.	49 26 47	2144	51 16 39	2148	53 6 25	2152	54 56 6	2157
	Fomalhaut W.	43 46 43	2508	45 27 45	2489	47 9 14	2472	48 51 6	2459
	Aldebaran E.	55 30 38	2194	53 42 2	2202	51 53 37	2211	50 5 26	2220
	Saturn E.	77 39 37	2139	75 49 38	2144	73 59 46	2149	72 10 1	2155
	Pollux E.	99 8 32	2125	97 18 11	2129	95 27 56	2134	93 37 48	2139
24	Jupiter W.	64 2 19	2190	65 51 1	2198	67 39 31	2208	69 27 47	2218
	Fomalhaut W.	57 23 58	2428	59 6 53	2427	60 49 50	2428	62 32 45	2430
	α Pegasi W.	40 3 22	3125	41 31 1	3068	42 59 50	3019	44 29 39	2977

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Aldebaran E.	48 17 28	2231	46 29 47	2243	44 42 24	2256	42 55 20	2271
	Saturn E.	70 20 25	2161	68 30 58	2168	66 41 42	2176	64 52 38	2184
	Pollux E.	91 47 49	2145	89 57 58	2151	88 8 17	2158	86 18 46	2166
25	Jupiter W.	71 15 48	2228	73 3 34	2239	74 51 3	2250	76 38 16	2262
	Fomalhaut W.	64 15 37	2433	65 58 24	2438	67 41 5	2444	69 23 37	2451
	α Pegasi W.	46 0 20	2941	47 31 47	2912	49 3 51	2886	50 36 28	2865
	Aldebaran E.	34 6 15	2372	32 22 0	2400	30 38 25	2431	28 55 35	2467
	Saturn E.	55 50 44	2235	54 3 9	2248	52 15 53	2261	50 28 56	2275
	Pollux E.	77 14 25	2213	75 26 16	2224	73 38 24	2235	71 50 49	2247
26	Jupiter W.	85 29 44	2328	87 15 2	2343	88 59 59	2358	90 44 34	2373
	Fomalhaut W.	77 53 21	2500	79 34 34	2512	81 15 30	2525	82 56 9	2539
	α Pegasi W.	58 24 45	2811	59 58 59	2808	61 33 17	2807	63 7 36	2808
	Saturn E.	41 39 30	2353	39 54 48	2371	38 10 32	2390	36 26 43	2410
	Pollux E.	62 57 31	2313	61 11 50	2328	59 26 31	2343	57 41 34	2357
	Regulus E.	99 30 31	2324	97 45 7	2338	96 0 3	2353	94 15 21	2368
	Mars E.	105 25 40	2500	103 44 27	2515	102 3 35	2530	100 23 4	2545
27	α Pegasi W.	70 58 15	2835	72 31 58	2843	74 5 30	2854	75 38 48	2864
	α Arietis W.	27 22 49	2733	28 58 45	2719	30 35 0	2710	32 11 26	2705
	Pollux E.	49 2 22	2438	47 19 41	2454	45 37 23	2471	43 55 29	2489
	Regulus E.	85 37 23	2448	83 54 56	2464	82 12 52	2481	80 31 12	2498
	Mars E.	92 5 58	2629	90 27 42	2645	88 49 48	2663	87 12 18	2681
	Venus E.	117 52 40	2525	116 12 2	2543	114 31 48	2559	112 51 57	2577
28	α Arietis W.	40 13 59	2720	41 50 13	2728	43 26 16	2736	45 2 8	2747
	Pollux E.	35 32 2	2575	33 52 33	2593	32 13 28	2610	30 34 47	2628
	Regulus E.	72 8 52	2584	70 29 35	2602	68 50 43	2620	67 12 15	2637
	Mars E.	79 10 42	2769	77 35 34	2787	76 0 49	2805	74 26 28	2823
	Venus E.	104 38 46	2666	103 1 21	2685	101 24 21	2703	99 47 45	2721
	Sun E.	138 42 59	2909	137 10 51	2928	135 39 7	2946	134 7 46	2965
29	α Arietis W.	52 57 55	2804	54 32 18	2816	56 6 25	2829	57 40 15	2842
	Aldebaran W.	23 9 49	3010	24 39 49	2992	26 10 12	2979	27 40 51	2970
	Regulus E.	59 5 46	2724	57 29 38	2740	55 53 51	2758	54 18 28	2774
	Mars E.	66 40 27	2912	65 8 23	2928	63 36 40	2946	62 5 19	2962
	Venus E.	91 50 45	2812	90 16 33	2829	88 42 43	2847	87 9 16	2864
	Sun E.	126 36 49	3056	125 7 45	3073	123 39 3	3091	122 10 43	3108
30	α Arietis W.	65 25 17	2906	66 57 28	2919	68 29 23	2931	70 1 2	2943
	Aldebaran W.	35 15 27	2970	36 46 17	2974	38 17 2	2979	39 47 41	2986
	Regulus E.	46 26 53	2855	44 53 37	2871	43 20 41	2887	41 48 5	2902
	Mars E.	54 33 42	3043	53 4 22	3058	51 35 21	3073	50 6 38	3087
	Venus E.	79 27 31	2948	77 56 13	2964	76 25 15	2980	74 54 37	2995
	Sun E.	114 54 9	3191	113 27 49	3207	112 1 48	3222	110 36 5	3237
31	α Arietis W.	77 35 35	3001	79 5 47	3011	80 35 46	3022	82 5 32	3032
	Aldebaran W.	47 18 49	3021	48 48 36	3028	50 18 14	3035	51 47 43	3043
	Saturn W.	25 1 23	3036	26 30 51	3037	28 0 18	3037	29 29 45	3039
	Regulus E.	34 9 54	2977	32 39 12	2992	31 8 49	3006	29 38 44	3022
	Mars E.	42 47 21	3155	41 20 18	3167	39 53 29	3179	38 26 55	3191
	Venus E.	67 26 3	3065	65 57 11	3079	64 28 36	3092	63 0 17	3104
	Sun E.	103 31 41	3305	102 7 35	3317	100 43 43	3329	99 20 5	3341

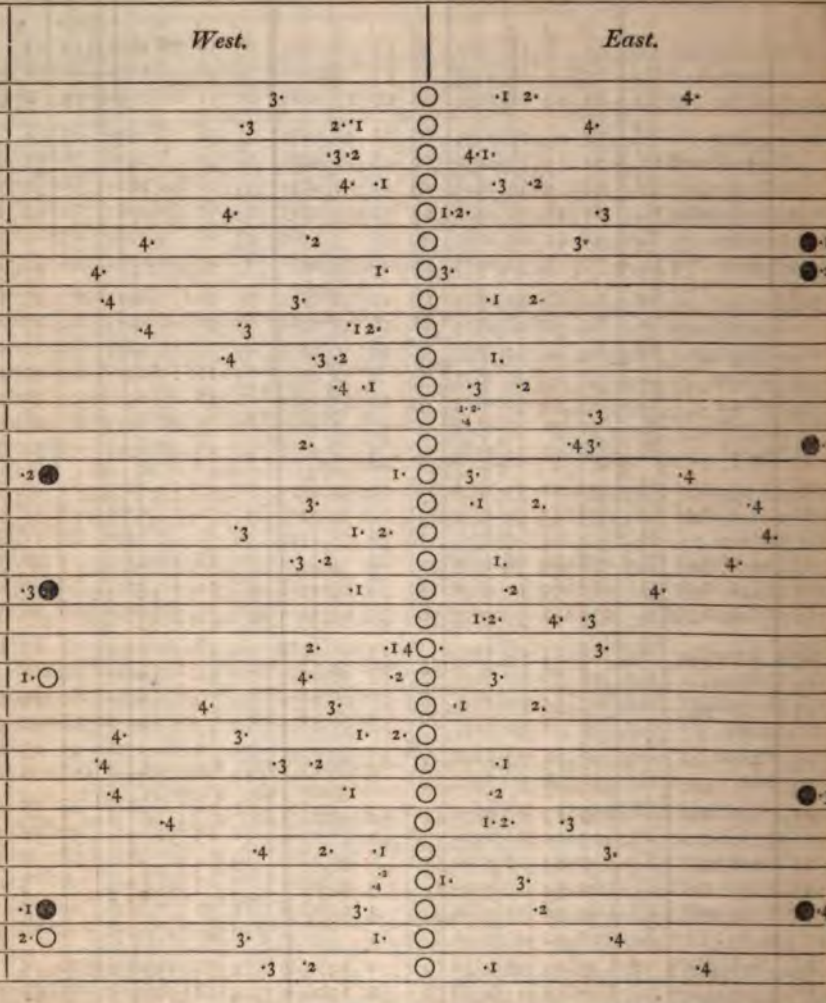
MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Aldebaran E.	41 8 38	2287	39 22 20	2305	37 36 28	2325	35 51 5	2348
	Saturn E.	63 3 46	2193	61 15 8	2202	59 26 44	2213	57 38 36	2224
	Pollux E.	84 29 28	2174	82 40 21	2183	80 51 28	2192	79 2 49	2202
25	Jupiter W.	78 25 11	2274	80 11 48	2287	81 58 6	2300	83 44 5	2314
	Fomalhaut W.	71 5 59	2459	72 48 10	2468	74 30 8	2478	76 11 52	2489
	α Pegasi W.	52 9 32	2848	53 42 57	2834	55 16 41	2824	56 50 38	2816
	Aldebaran E.	27 13 35	2508	25 32 33	2555	23 52 36	2611	22 13 56	2678
	Saturn E.	48 42 19	2289	46 56 3	2304	45 10 9	2319	43 24 37	2336
	Pollux E.	70 3 32	2259	68 16 32	2272	66 29 52	2285	64 43 31	2300
26	Jupiter W.	92 28 47	2389	94 12 38	2404	95 56 7	2421	97 39 12	2437
	Fomalhaut W.	84 36 28	2553	86 16 27	2568	87 56 6	2584	89 35 23	2600
	α Pegasi W.	64 41 54	2810	66 16 9	2814	67 50 19	2819	69 24 22	2827
	Saturn E.	34 43 23	2431	33 0 32	2453	31 18 13	2477	29 36 28	2502
	Pollux E.	55 56 58	2373	54 12 45	2389	52 28 54	2405	50 45 26	2421
	Regulus E.	92 31 0	2384	90 47 2	2399	89 3 26	2415	87 20 13	2431
	Mars E.	98 42 54	2561	97 3 6	2578	95 23 41	2594	93 44 38	2611
27	α Pegasi W.	77 11 53	2876	78 44 42	2890	80 17 14	2902	81 49 30	2917
	α Arietis W.	33 47 59	2704	35 24 34	2705	37 1 7	2708	38 37 37	2713
	Pollux E.	42 14 0	2505	40 32 54	2522	38 52 12	2540	37 11 55	2558
	Regulus E.	78 49 56	2515	77 9 4	2532	75 28 36	2550	73 48 32	2567
	Mars E.	85 35 12	2698	83 58 29	2716	82 22 10	2733	80 46 14	2751
	Venus E.	111 12 30	2595	109 33 28	2612	107 54 50	2630	106 16 36	2648
28	α Arietis W.	46 37 46	2757	48 13 11	2768	49 48 21	2779	51 23 16	2791
	Pollux E.	28 56 30	2646	27 18 38	2663	25 41 9	2681	24 4 4	2699
	Regulus E.	65 34 10	2654	63 56 29	2672	62 19 12	2689	60 42 17	2707
	Mars E.	72 52 30	2841	71 18 55	2859	69 45 43	2877	68 12 54	2894
	Venus E.	98 11 33	2739	96 35 45	2757	95 0 21	2776	93 25 22	2793
	Sun E.	132 36 49	2983	131 6 15	3001	129 36 4	3019	128 6 15	3038
29	α Arietis W.	59 13 48	2855	60 47 5	2867	62 20 6	2881	63 52 49	2893
	Aldebaran W.	29 11 41	2966	30 42 36	2964	32 13 34	2964	33 44 32	2966
	Regulus E.	52 43 26	2791	51 8 46	2807	49 34 27	2824	48 0 30	2839
	Mars E.	60 34 19	2979	59 3 40	2995	57 33 21	3011	56 3 22	3026
	Venus E.	85 36 11	2882	84 3 29	2898	82 31 8	2916	80 59 9	2932
	Sun E.	120 42 43	3126	119 15 5	3143	117 47 47	3158	116 20 48	3175
30	α Arietis W.	71 32 26	2955	73 3 35	2967	74 34 29	2978	76 5 9	2989
	Aldebaran W.	41 18 11	2992	42 48 34	2999	44 18 48	3006	45 48 53	3014
	Regulus E.	40 15 49	2916	38 43 51	2932	37 12 13	2947	35 40	
	Mars E.	48 38 13	3101	47 10 5	3115	45 42 14	3129	44 14	
	Venus E.	73 24 18	3010	71 54 17	3025	70 24 35	3039	68 5	
	Sun E.	109 10 39	3251	107 45 30	3265	106 20 38	3279	104 5	
31	α Arietis W.	83 35 5	3041	85 4 27	3050	86 33 38	3060	88	
	Aldebaran W.	53 17 2	3049	54 46 14	3057	56 15 16	3063	57 4	
	Saturn W.	30 59 9	3042	32 28 30	3045	33 57 47	3048	35 2	
	Regulus E.	28 8 59	3038	26 39 33	3054	25 10 27	3070	23 4	
	Mars E.	37 0 35	3202	35 34 28	3213	34 8 34	3224	32 4	
	Venus E.	61 32 12	3116	60 4 22	3127	58 36 45	3138	57	
	Sun E.	97 56 41	3351	96 33 28	3362	95 10 28	3372	93	

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 10h, Mean Time.



This Table represents, at 10h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals, 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shadow, of Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $0^d.418488$. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	+1·2681	+0·4659	+9·7393	−0·9069	11 19 31·36	192	273	·747
2	1·2670	0·5146	9·7410	0·9068	11 15 35·46	193	274	·750
3	1·2657	0·5583	9·7427	0·9067	11 11 39·55	194	275	·753
4	+1·2643	+0·5979	+9·7444	−0·9066	11 7 43·64	195	276	·756
5	1·2627	0·6341	9·7461	0·9065	11 3 47·73	196	277	·758
6	1·2610	0·6674	9·7479	0·9063	10 59 51·83	197	278	·761
7	+1·2592	+0·6983	+9·7496	−0·9061	10 55 55·92	198	279	·764
8	1·2573	0·7270	9·7513	0·9059	10 52 0·01	199	280	·767
9	1·2552	0·7538	9·7531	0·9056	10 48 4·10	200	281	·769
10	+1·2529	+0·7789	+9·7548	−0·9053	10 44 8·19	201	282	·772
11	1·2505	0·8026	9·7565	0·9049	10 40 12·29	202	283	·775
12	1·2480	0·8249	9·7583	0·9046	10 36 16·38	203	284	·778
13	+1·2453	+0·8460	+9·7601	−0·9042	10 32 20·47	204	285	·780
14	1·2425	0·8660	9·7618	0·9038	10 28 24·56	205	286	·783
15	1·2395	0·8851	9·7636	0·9033	10 24 28·65	206	287	·786
16	+1·2364	+0·9032	+9·7654	−0·9028	10 20 32·74	207	288	·789
17	1·2331	0·9205	9·7672	0·9023	10 16 36·84	208	289	·791
18	1·2297	0·9369	9·7690	0·9018	10 12 40·93	209	290	·794
19	+1·2261	+0·9527	+9·7708	−0·9013	10 8 45·02	210	291	·797
20	1·2223	0·9678	9·7726	0·9007	10 4 49·11	211	292	·799
21	1·2184	0·9823	9·7744	0·9001	10 0 53·20	212	293	·802
22	+1·2143	+0·9962	+9·7763	−0·8995	9 56 57·29	213	294	·805
23	1·2100	1·0095	9·7781	0·8988	9 53 1·38	214	295	·808
24	1·2055	1·0223	9·7800	0·8982	9 49 5·47	215	296	·810
25	+1·2009	+1·0346	+9·7819	−0·8975	9 45 9·57	216	297	·813
26	1·1961	1·0465	9·7838	0·8968	9 41 13·66	217	298	·816
27	1·1910	1·0579	9·7856	0·8961	9 37 17·75	218	299	·819
28	+1·1858	+1·0689	+9·7875	−0·8954	9 33 21·84	2		821
29	1·1804	1·0795	9·7895	0·8946	9 29 25·93			·4
30	1·1748	1·0898	9·7914	0·8939	9 25 30·02			7
31	1·1690	1·0997	9·7933	0·8931	9 21 34·1			›
32	+1·1629	+1·1092	+9·7953	−0·8923	9 17 38			

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be subtracted from Apparent Time.*	Diff. for 1 hour.
		h m s	s	° ′ ″	″	m s	m s	s
Thur.	1	14 24 30·60	9·806	S. 14 21 8·2	48·02	1 6·91	16 16·93	0·051
Frid.	2	14 28 25·95	9·841	14 40 20·7	47·43	1 7·03	16 18·13	0·016
Sat.	3	14 32 22·13	9·876	14 59 19·0	46·83	1 7·14	16 18·51	0·019
Sun.	4	14 36 19·14	9·911	15 18 2·8	46·20	1 7·26	16 18·05	0·054
Mon.	5	14 40 16·98	9·946	15 36 31·6	45·56	1 7·38	16 16·76	0·089
Tues.	6	14 44 15·68	9·981	15 54 45·0	44·90	1 7·49	16 14·63	0·124
Wed.	7	14 48 15·22	10·016	16 12 42·5	44·22	1 7·61	16 11·65	0·159
Thur.	8	14 52 15·61	10·051	16 30 23·8	43·52	1 7·73	16 7·83	0·195
Frid.	9	14 56 16·86	10·087	16 47 48·3	42·81	1 7·85	16 3·15	0·230
Sat.	10	15 0 18·95	10·122	17 4 55·7	42·08	1 7·97	15 57·63	0·265
Sun.	11	15 4 21·89	10·158	17 21 45·6	41·33	1 8·09	15 51·27	0·300
Mon.	12	15 8 25·68	10·193	17 38 17·6	40·56	1 8·21	15 44·06	0·336
Tues.	13	15 12 30·30	10·228	17 54 31·0	39·78	1 8·33	15 36·01	0·371
Wed.	14	15 16 35·77	10·263	18 10 25·7	38·98	1 8·45	15 27·11	0·405
Thur.	15	15 20 42·07	10·297	18 26 1·2	38·16	1 8·56	15 17·39	0·439
Frid.	16	15 24 49·20	10·332	18 41 17·0	37·33	1 8·68	15 6·85	0·474
Sat.	17	15 28 57·16	10·366	18 56 12·9	36·48	1 8·80	14 55·49	0·508
Sun.	18	15 33 5·94	10·399	19 10 48·4	35·62	1 8·92	14 43·30	0·542
Mon.	19	15 37 15·52	10·432	19 25 3·2	34·74	1 9·03	14 30·31	0·575
Tues.	20	15 41 25·90	10·466	19 38 56·9	33·84	1 9·15	14 16·52	0·608
Wed.	21	15 45 37·10	10·500	19 52 29·1	32·93	1 9·26	14 1·92	0·641
Thur.	22	15 49 49·09	10·533	20 5 39·5	32·01	1 9·37	13 46·53	0·674
Frid.	23	15 54 1·87	10·565	20 18 27·7	31·08	1 9·48	13 30·35	0·707
Sat.	24	15 58 15·43	10·597	20 30 53·5	30·13	1 9·58	13 13·39	0·739
Sun.	25	16 2 29·77	10·629	20 42 56·6	29·16	1 9·69	12 55·66	0·770
Mon.	26	16 6 44·87	10·661	20 54 36·5	28·19	1 9·79	12 37·17	0·802
Tues.	27	16 11 0·72	10·692	21 5 52·9	27·20	1 9·89	12 17·93	0·833
Wed.	28	16 15 17·32	10·722	21 16 45·6	26·20	1 9·99	11 57·95	0·863
Thur.	29	16 19 34·63	10·751	21 27 14·3	25·18	1 10·09	11 37·25	0·892
Frid.	30	16 23 52·65	10·780	21 37 18·5	24·15	1 10·18	11 15·84	0·921
Sat.	31	16 28 11·37		S. 21 46 58·1		1 10·27	10 53·74	

* *Mean* Time of the Semidiameter passing may be found by subtracting 0ᵐ·19 from the *Sidereal* Time.

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	THE SUN'S *Apparent* Declination.	Semidiam.*	Equation of Time, *to be added to Mean Time.*	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Thur.	1	14 24 33·26	S. 14 21 21·3	16 9·7	16 16·94	14 40 50·20
Frid.	2	14 28 28·62	14 40 33·6	16 9·9	16 18·13	14 44 46·75
Sat.	3	14 32 24·81	14 59 31·8	16 10·1	16 18·50	14 48 43·31
Sun.	4	14 36 21·83	15 18 15·4	16 10·4	16 18·03	14 52 39·86
Mon.	5	14 40 19·68	15 36 43·9	16 10·6	16 16·74	14 56 36·42
Tues.	6	14 44 18·38	15 54 57·1	16 10·9	16 14·60	15 0 32·97
Wed.	7	14 48 17·92	16 12 54·4	16 11·1	16 11·61	15 4 29·53
Thur.	8	14 52 18·31	16 30 35·4	16 11·3	16 7·78	15 8 26·09
Frid.	9	14 56 19·55	16 47 59·8	16 11·5	16 3·09	15 12 22·64
Sat.	10	15 0 21·64	17 5 6·9	16 11·8	15 57·56	15 16 19·20
Sun.	11	15 4 24·57	17 21 56·5	16 12·0	15 51·19	15 20 15·76
Mon.	12	15 8 28·35	17 38 28·2	16 12·2	15 43·96	15 24 12·31
Tues.	13	15 12 32·96	17 54 41·4	16 12·4	15 35·91	15 28 8·87
Wed.	14	15 16 38·41	18 10 35·7	16 12·7	15 27·01	15 32 5·42
Thur.	15	15 20 44·70	18 26 10·9	16 12·9	15 17·28	15 36 1·98
Frid.	16	15 24 51·81	18 41 26·4	16 13·1	15 6·73	15 39 58·54
Sat.	17	15 28 59·74	18 56 22·0	16 13·3	14 55·36	15 43 55·10
Sun.	18	15 33 8·49	19 10 57·2	16 13·5	14 43·17	15 47 51·65
Mon.	19	15 37 18·04	19 25 11·6	16 13·7	14 30·17	15 51 48·21
Tues.	20	15 41 28·39	19 39 4·9	16 13·9	14 16·38	15 55 44·77
Wed.	21	15 45 39·55	19 52 36·8	16 14·1	14 1·77	15 59 41·32
Thur.	22	15 49 51·51	20 5 46·8	16 14·3	13 46·37	16 3 37·88
Frid.	23	15 54 4·25	20 18 34·7	16 14·5	13 30·19	16 7 34·44
Sat.	24	15 58 17·77	20 31 0·2	16 14·7	13 13·23	16 11 31·00
Sun.	25	16 2 32·06	20 43 2·9	16 14·9	12 [illegible]	·6 15 27·55
Mon.	26	16 6 47·11	20 54 42·4	16 15·1	[illegible]	19 24·11
Tues.	27	16 11 2·91	21 5 58·5	16 15·2		2 20·67
Wed.	28	16 15 19·45	21 16 50·9	16 [illegible]		
Thur.	29	16 19 36·71	21 27 19·2	16		
Frid.	30	16 23 54·67	21 37 23·1	16		
Sat.	31	16 28 13·33	S. 21 47 2·3	16		

* The Semidiameter for *Apparent* Noon may be as[illegible]

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent* Longitude. *Noon.*	THE SUN'S *Apparent* Latitude. *Noon.*	Logarithm of the Radius Vector of the Earth. *Noon.*	THE MOON'S Semidiameter. *Noon.*	THE MOON'S Semidiameter. *Midnight.*	THE MOON'S Horizontal Parallax. *Noon.*	THE MOON'S Horizontal Parallax. *Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	218 31 17·2	N.0·84	9·9964743	14 56·0	14 53·0	54 41·7	54 30·6
2	219 31 23·9	0·83	9·9963661	14 50·7	14 49·0	54 22·1	54 16·1
3	220 31 32·8	0·78	9·9962589	14 48·1	14 47·9	54 12·8	54 12·0
4	221 31 43·8	0·71	9·9961526	14 48·4	14 49·5	54 13·8	54 17·8
5	222 31 56·8	0·61	9·9960472	14 51·1	14 53·4	54 23·9	54 32·1
6	223 32 11·8	0·49	9·9959426	14 56·1	14 59·2	54 42·0	54 53·5
7	224 32 28·8	0·36	9·9958385	15 2·7	15 6·5	55 6·3	55 20·2
8	225 32 47·7	0·22	9·9957350	15 10·5	15 14·8	55 34·9	55 50·4
9	226 33 8·3	N.0·09	9·9956323	15 19·1	15 23·4	56 6·2	56 22·1
10	227 33 30·7	S.0·04	9·9955303	15 27·7	15 32·0	56 37·9	56 53·4
11	228 33 54·7	0·15	9·9954290	15 36·1	15 40·0	57 8·6	57 23·2
12	229 34 20·3	0·25	9·9953286	15 43·9	15 47·6	57 37·3	57 50·5
13	230 34 47·3	0·32	9·9952289	15 51·0	15 54·2	58 3·0	58 14·8
14	231 35 15·7	0·35	9·9951302	15 57·2	16 0·0	58 25·8	58 36·0
15	232 35 45·5	0·36	9·9950327	16 2·6	16 4·9	58 45·5	58 54·2
16	233 36 16·6	0·35	9·9949365	16 7·1	16 9·0	59 2·1	59 9·2
17	234 36 49·0	0·29	9·9948418	16 10·7	16 12·1	59 15·4	59 20·4
18	235 37 22·6	0·21	9·9947486	16 13·1	16 13·8	59 24·2	59 26·6
19	236 37 57·3	S.0·12	9·9946573	16 14·0	16 13·7	59 27·3	59 26·2
20	237 38 33·3	0·00	9·9945679	16 12·8	16 11·4	59 23·1	59 17·9
21	238 39 10·5	N.0·14	9·9944804	16 9·4	16 6·8	59 10·5	59 0·9
22	239 39 49·0	0·26	9·9943951	16 3·5	15 59·7	58 49·0	58 35·2
23	240 40 28·8	0·39	9·9943119	15 55·4	15 50·7	58 19·5	58 2·1
24	241 41 9·9	0·51	9·9942310	15 45·6	15 40·3	57 43·5	57 23·8
25	242 41 52·4	0·60	9·9941526	15 34·7	15 29·1	57 3·5	56 43·0
26	243 42 36·3	0·68	9·9940764	15 23·6	15 18·1	56 22·7	56 2·8
27	244 43 21·5	0·73	9·9940025	15 12·9	15 8·0	55 43·7	55 25·7
28	245 44 8·2	0·75	9·9939309	15 3·5	14 59·5	55 9·3	54 54·7
29	246 44 56·3	0·74	9·9938615	14 56·1	14 53·3	54 42·1	54 31·7
30	247 45 45·9	0·70	9·9937942	14 51·1	14 49·6	54 23·8	54 18·4
31	248 46 37·0	N.0·63	9·9937290	14 48·9	14 48·8	54 15·6	54 15·4

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
hur.	1	126 5 39·3	132 6 3·1	N. 5 16 52·3	N. 5 13 44·7	21·4	18 34·0
rid.	2	138 4 18·2	144 1 0·2	5 7 14·4	4 57 27·9	22·4	19 18·3
at.	3	149 56 44·2	155 52 5·0	4 44 32·9	4 28 36·5	23·4	20 0·0
un.	4	161 47 35·9	167 43 49·5	4 9 47·7	3 48 16·2	24·4	20 40·3
lon.	5	173 41 16·0	179 40 23·9	3 24 11·7	2 57 46·8	25·4	21 20·0
ues.	6	185 41 38·9	191 45 24·6	2 29 14·9	1 58 50·6	26·4	22 0·3
Ved.	7	197 52 1·2	204 1 46·0	1 26 50·8	N. 0 53 34·6	27·4	22 42·3
hur.	8	210 14 53·2	216 31 33·1	N. 0 19 22·9	S. 0 15 21·6	28·4	23 27·2
rid.	9	222 51 53·2	229 15 57·5	S. 0 50 14·1	1 24 48·0	29·4	☌
at.	10	235 43 47·0	242 15 19·5	1 58 35·8	2 31 8·8	0·7	0 15·8
un.	11	248 50 30·3	255 29 13·0	3 1 58·7	3 30 36·2	1·7	1 8·7
lon.	12	262 11 18·6	268 56 37·3	3 56 34·3	4 19 27·0	2·7	2 5·6
ues.	13	275 44 58·0	282 36 8·7	4 38 49·8	4 54 22·0	3·7	3 5·3
Ved.	14	289 29 57·4	296 26 11·3	5 5 45·1	5 12 44·9	4·7	4 5·4
hur.	15	303 24 38·0	310 25 5·6	5 15 10·8	5 12 56·5	5·7	5 3·9
rid.	16	317 27 20·8	324 31 10·6	5 6 0·5	4 54 25·6	6·7	5 59·3
at.	17	331 36 21·8	338 42 40·0	4 38 19·7	4 17 55·4	7·7	6 51·6
un.	18	345 49 49·5	352 57 33·2	3 53 30·2	3 25 25·7	8·7	7 41·3
lon.	19	0 5 32·2	7 13 25·9	2 54 8·9	2 20 10·2	9·7	8 29·6
ues.	20	14 20 50·9	21 27 22·5	1 44 3·3	S. 1 6 24·6	10·7	9 18·0
Ved.	21	28 32 33·6	35 35 56·4	S. 0 27 52·6	N. 0 10 53·9	11·7	10 7·5
hur.	22	42 37 2·2	49 35 23·0	N. 0 49 15·7	1 26 36·4	12·7	10 59·1
rid.	23	56 30 31·1	63 22 1·1	2 2 21·0	2 35 57·8	13·7	11 53·4
at.	24	70 9 30·7	76 52 40·5	3 6 59·3	3 35 3·0	14·7	12 49·8
un.	25	83 31 16·3	90 5 8·6	3 59 50·2	4 21 7·5	15·7	13 47·0
lon.	26	96 34 13·0	102 58 31·0	4 38 45·5	4 52 38·7	16·7	14 43·2
ues.	27	109 18 9·6	115 33 20·7	5 2 45·8	5 9 7·5	17·7	
Ved.	28	121 44 21·9	127 51 34·9	5 11 47·7	5 10 51·9	18	
hur.	29	133 55 25·6	139 56 23·4	5 6 26·7	4 58 40·6		
rid.	30	145 55 0·4	151 51 51·3	4 47 41·9	4 33 40·4		
at.	31	157 47 32·2	163 42 40·9	N. 4 16 45·0	N. 3 57		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 1.				*SATURDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	8 39 37·17	N.23 52 35·0	78·62	0	10 15 5·73	N.15 56 5·5	117·33
1	8 41 43·76	23 44 43·3	79·65	1	10 16 58·46	15 44 21·5	117·93
2	8 43 50·01	23 36 45·4	80·65	2	10 18 50·97	15 32 33·9	118·52
3	8 45 55·93	23 28 41·5	81·65	3	10 20 43·27	15 20 42·8	119·10
4	8 48 1·52	23 20 31·6	82·65	4	10 22 35·36	15 8 48·2	119·68
5	8 50 6·78	23 12 15·7	83·63	5	10 24 27·23	14 56 50·1	120·25
6	8 52 11·71	23 3 53·9	84·62	6	10 26 18·90	14 44 48·6	120·82
7	8 54 16·32	22 55 26·2	85·57	7	10 28 10·37	14 32 43·7	121·37
8	8 56 20·59	22 46 52·8	86·52	8	10 30 1·64	14 20 35·5	121·92
9	8 58 24·54	22 38 13·7	87·48	9	10 31 52·71	14 8 24·0	122·45
10	9 0 28·16	22 29 28·8	88·40	10	10 33 43·60	13 56 9·3	122·98
11	9 2 31·46	22 20 38·4	89·33	11	10 35 34·30	13 43 51·4	123·52
12	9 4 34·44	22 11 42·4	90·25	12	10 37 24·82	13 31 30·3	124·03
13	9 6 37·10	22 2 40·9	91·15	13	10 39 15·16	13 19 6·1	124·53
14	9 8 39·44	21 53 34·0	92·05	14	10 41 5·32	13 6 38·9	125·03
15	9 10 41·46	21 44 21·7	92·95	15	10 42 55·31	12 54 8·7	125·53
16	9 12 43·17	21 35 4·0	93·82	16	10 44 45·13	12 41 35·5	126·02
17	9 14 44·56	21 25 41·1	94·70	17	10 46 34·79	12 28 59·4	126·50
18	9 16 45·65	21 16 12·9	95·55	18	10 48 24·28	12 16 20·4	126·98
19	9 18 46·42	21 6 39·6	96·40	19	10 50 13·62	12 3 38·5	127·43
20	9 20 46·89	20 57 1·2	97·25	20	10 52 2·81	11 50 53·9	127·90
21	9 22 47·05	20 47 17·7	98·08	21	10 53 51·85	11 38 6·5	128·35
22	9 24 46·91	20 37 29·2	98·90	22	10 55 40·74	11 25 16·4	128·80
23	9 26 46·47	N.20 27 35·8	99·72	23	10 57 29·50	N.11 12 23·6	129·23
	FRIDAY 2.				*SUNDAY* 4.		
0	9 28 45·73	N.20 17 37·5	100·53	0	10 59 18·11	N.10 59 28·2	129·67
1	9 30 44·70	20 7 34·3	101·32	1	11 1 6·59	10 46 30·2	130·08
2	9 32 43·37	19 57 26·4	102·12	2	11 2 54·95	10 33 29·7	130·50
3	9 34 41·75	19 47 13·7	102·88	3	11 4 43·18	10 20 26·7	130·92
4	9 36 39·84	19 36 56·4	103·67	4	11 6 31·29	10 7 21·2	131·32
5	9 38 37·65	19 26 34·4	104·43	5	11 8 19·28	9 54 13·3	131·72
6	9 40 35·18	19 16 7·8	105·18	6	11 10 7·16	9 41 3·0	132·10
7	9 42 32·43	19 5 36·7	105·92	7	11 11 54·93	9 27 50·4	132·48
8	9 44 29·40	18 55 1·2	106·67	8	11 13 42·60	9 14 35·5	132·87
9	9 46 26·10	18 44 21·2	107·38	9	11 15 30·16	9 1 18·3	133·23
10	9 48 22·52	18 33 36·9	108·12	10	11 17 17·63	8 47 58·9	133·60
11	9 50 18·68	18 22 48·2	108·82	11	11 19 5·01	8 34 37·3	133·95
12	9 52 14·57	18 11 55·3	109·52	12	11 20 52·29	8 21 13·6	134·30
13	9 54 10·20	18 0 58·2	110·22	13	11 22 39·49	8 7 47·8	134·65
14	9 56 5·57	17 49 56·9	110·90	14	11 24 26·61	7 54 19·9	134·98
15	9 58 0·69	17 38 51·5	111·58	15	11 26 13·66	7 40 50·9	135·30
16	9 59 55·55	17 27 42·0	112·25	16	11 28 0·63	7 27 18·2	135·63
17	10 1 50·17	17 16 28·5	112·90	17	11 29 47·54	7 13 44·4	135·95
18	10 3 44·53	17 5 11·1	113·57	18	11 31 34·38	7 0 8·7	136·25
19	10 5 38·65	16 53 49·7	114·22	19	11 33 21·16	6 46 31·2	136·55
20	10 7 32·54	16 42 24·4	114·85	20	11 35 7·89	6 32 51·9	136·85
21	10 9 26·18	16 30 55·3	115·48	21	11 36 54·56	6 19 10·8	137·12
22	10 11 19·59	16 19 22·4	116·10	22	11 38 41·19	6 5 28·1	137·42
23	10 13 12·78	16 7 45·8	116·72	23	11 40 27·78	5 51 43·6	137·68
24	10 15 5·73	N.15 56 5·5		24	11 42 14·33	N. 5 37 57·5	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 5.		
	h m s	° ′ ″	″
0	11 42 14·33	N. 5 37 57·5	137·95
1	11 44 0·84	5 24 9·8	138·20
2	11 45 47·33	5 10 20·6	138·45
3	11 47 33·78	4 56 29·9	138·70
4	11 49 20·22	4 42 37·7	138·93
5	11 51 6·64	4 28 44·1	139·17
6	11 52 53·04	4 14 49·1	139·40
7	11 54 39·44	4 0 52·7	139·60
8	11 56 25·83	3 46 55·1	139·82
9	11 58 12·22	3 32 56·2	140·02
10	11 59 58·61	3 18 56·1	140·20
11	12 1 45·01	3 4 54·9	140·40
12	12 3 31·42	2 50 52·5	140·57
13	12 5 17·85	2 36 49·1	140·75
14	12 7 4·30	2 22 44·6	140·92
15	12 8 50·78	2 8 39·1	141·08
16	12 10 37·28	1 54 32·6	141·22
17	12 12 23·82	1 40 25·3	141·37
18	12 14 10·40	1 26 17·1	141·50
19	12 15 57·02	1 12 8·1	141·63
20	12 17 43·69	0 57 58·3	141·75
21	12 19 30·40	0 43 47·8	141·87
22	12 21 17·17	0 29 36·6	141·98
23	12 23 4·01	N. 0 15 24·7	142·07
	TUESDAY 6.		
0	12 24 50·90	N. 0 1 12·3	142·17
1	12 26 37·86	S. 0 13 0·7	142·25
2	12 28 24·90	0 27 14·2	142·32
3	12 30 12·01	0 41 28·1	142·40
4	12 31 59·21	0 55 42·5	142·45
5	12 33 46·49	1 9 57·2	142·50
6	12 35 33·86	1 24 12·2	142·55
7	12 37 21·32	1 38 27·5	142·58
8	12 39 8·88	1 52 43·0	142·62
9	12 40 56·55	2 6 58·7	142·63
10	12 42 44·32	2 21 14·5	142·65
11	12 44 32·21	2 35 30·4	142·65
12	12 46 20·21	2 49 46·3	142·65
13	12 48 8·33	3 4 2·2	142·62
14	12 49 56·58	3 18 17·9	142·62
15	12 51 44·96	3 32 33·6	142·58
16	12 53 33·47	3 46 49·1	142·53
17	12 55 22·12	4 1 4·3	142·50
18	12 57 10·91	4 15 19·3	142·43
19	12 58 59·84	4 29 33·9	142·37
20	13 0 48·93	4 43 48·1	142·30
21	13 2 38·17	4 58 1·9	142·22
22	13 4 27·58	5 12 15·2	142·12
23	13 6 17·14	5 26 27·9	142·02
24	13 8 6·87	S. 5 40 40·0	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 7.		
	h m s	° ′ ″	″
0	13 8 6·87	S. 5 40 40·0	141·92
1	13 9 56·78	5 54 51·5	141·78
2	13 11 46·86	6 9 2·2	141·67
3	13 13 37·13	6 23 12·2	141·52
4	13 15 27·58	6 37 21·3	141·38
5	13 17 18·22	6 51 29·6	141·22
6	13 19 9·06	7 5 36·9	141·05
7	13 21 0·09	7 19 43·2	140·87
8	13 22 51·33	7 33 48·4	140·70
9	13 24 42·78	7 47 52·6	140·48
10	13 26 34·44	8 1 55·5	140·30
11	13 28 26·31	8 15 57·3	140·07
12	13 30 18·41	8 29 57·7	139·85
13	13 32 10·73	8 43 56·8	139·62
14	13 34 3·28	8 57 54·5	139·37
15	13 35 56·06	9 11 50·7	139·10
16	13 37 49·08	9 25 45·3	138·83
17	13 39 42·34	9 39 38·3	138·57
18	13 41 35·84	9 53 29·7	138·28
19	13 43 29·60	10 7 19·4	137·97
20	13 45 23·61	10 21 7·2	137·67
21	13 47 17·88	10 34 53·2	137·35
22	13 49 12·41	10 48 37·3	137·02
23	13 51 7·21	S. 11 2 19·4	136·67
	THURSDAY 8.		
0	13 53 2·27	S. 11 15 59·4	136·32
1	13 54 57·61	11 29 37·3	135·95
2	13 56 53·23	11 43 13·0	135·57
3	13 58 49·13	11 56 46·4	135·18
4	14 0 45·32	12 10 17·5	134·78
5	14 2 41·80	12 23 46·2	134·38
6	14 4 38·57	12 37 12·5	133·95
7	14 6 35·64	12 50 36·2	133·52
8	14 8 33·01	13 3 57·3	133·07
9	14 10 30·69	13 17 15·7	132·60
10	14 12 28·68	13 30 31·3	132·13
11	14 14 26·98	13 43 44·1	131·67
12	14 16 25·60	13 56 54·1	131·17
13	14 18 24·54	14 10 1·1	130·65
14	14 20 23·80	14 23 5·0	130·13
15	14 22 23·39	14 36 5·8	129·60
16	14 24 23·32	14 49 3·4	129·05
17	14 26 23·58	15 1 57·7	128·50
18	14 28 24·18	15 14 48·7	127·9
19	14 30 25·12	15 27 36·2	127
20	14 32 26·40	15 40 20·2	12
21	14 34 28·03	15 53 0·7	1
22	14 36 30·01	16 5 37·5	
23	14 38 32·35	16 18 10·5	
24	14 40 35·06	S. 16 30 39·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 9.				*SUNDAY* 11.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	14 40 35·06	S. 16 30 39·7	124·22	0	16 26 25·83	S. 24 47 23·6	76·13
1	14 42 38·12	16 43 5·0	123·55	1	16 28 48·01	24 55 0·4	74·78
2	14 44 41·54	16 55 26·3	122·88	2	16 31 10·57	25 2 29·1	73·40
3	14 46 45·33	17 7 43·6	122·18	3	16 33 33·52	25 9 49·5	72·02
4	14 48 49·50	17 19 56·7	121·48	4	16 35 56·84	25 17 1·6	70·62
5	14 50 54·03	17 32 5·6	120·75	5	16 38 20·54	25 24 5·3	69·20
6	14 52 58·94	17 44 10·1	120·03	6	16 40 44·60	25 31 0·5	67·78
7	14 55 4·23	17 56 10·3	119·28	7	16 43 9·03	25 37 47·2	66·33
8	14 57 9·90	18 8 6·0	118·52	8	16 45 33·83	25 44 25·2	64·87
9	14 59 15·95	18 19 57·1	117·75	9	16 47 58·99	25 50 54·4	63·42
10	15 1 22·39	18 31 43·6	116·97	10	16 50 24·50	25 57 14·9	61·93
11	15 3 29·21	18 43 25·4	116·15	11	16 52 50·36	26 3 26·5	60·43
12	15 5 36·43	18 55 2·3	115·33	12	16 55 16·57	26 9 29·1	58·93
13	15 7 44·04	19 6 34·3	114·52	13	16 57 43·12	26 15 22·7	57·42
14	15 9 52·04	19 18 1·4	113·67	14	17 0 10·00	26 21 7·2	55·88
15	15 12 0·44	19 29 23·4	112·80	15	17 2 37·22	26 26 42·5	54·35
16	15 14 9·24	19 40 40·2	111·92	16	17 5 4·76	26 32 8·6	52·78
17	15 16 18·43	19 51 51·7	111·03	17	17 7 32·62	26 37 25·3	51·23
18	15 18 28·03	20 2 57·9	110·13	18	17 10 0·79	26 42 32·7	49·65
19	15 20 38·03	20 13 58·7	109·22	19	17 12 29·27	26 47 30·6	48·05
20	15 22 48·44	20 24 54·0	108·28	20	17 14 58·05	26 52 18·9	46·47
21	15 24 59·25	20 35 43·7	107·33	21	17 17 27·13	26 56 57·7	44·87
22	15 27 10·47	20 46 27·7	106·37	22	17 19 56·50	27 1 26·9	43·23
23	15 29 22·09	S. 20 57 5·9	105·40	23	17 22 26·16	S. 27 5 46·3	41·60
	SATURDAY 10.				*MONDAY* 12.		
0	15 31 34·13	S. 21 7 38·3	104·40	0	17 24 56·09	S. 27 9 55·9	39·97
1	15 33 46·58	21 18 4·7	103·38	1	17 27 26·29	27 13 55·7	38·32
2	15 35 59·43	21 28 25·0	102·37	2	17 29 56·76	27 17 45·6	36·65
3	15 38 12·70	21 38 39·2	101·33	3	17 32 27·48	27 21 25·5	34·98
4	15 40 26·38	21 48 47·2	100·28	4	17 34 58·45	27 24 55·4	33·32
5	15 42 40·47	21 58 48·9	99·22	5	17 37 29·66	27 28 15·3	31·62
6	15 44 54·98	22 8 44·2	98·13	6	17 40 1·11	27 31 25·0	29·93
7	15 47 9·89	22 18 33·0	97·03	7	17 42 32·78	27 34 24·6	28·22
8	15 49 25·22	22 28 15·2	95·92	8	17 45 4·67	27 37 13·9	26·52
9	15 51 40·96	22 37 50·7	94·80	9	17 47 36·77	27 39 53·0	24·80
10	15 53 57·11	22 47 19·5	93·67	10	17 50 9·08	27 42 21·8	23·07
11	15 56 13·67	22 56 41·5	92·50	11	17 52 41·58	27 44 40·2	21·33
12	15 58 30·64	23 5 56·5	91·33	12	17 55 14·27	27 46 48·2	19·58
13	16 0 48·02	23 15 4·5	90·15	13	17 57 47·14	27 48 45·7	17·85
14	16 3 5·81	23 24 5·4	88·95	14	18 0 20·18	27 50 32·8	16·10
15	16 5 24·00	23 32 59·1	87·73	15	18 2 53·38	27 52 9·4	14·33
16	16 7 42·60	23 41 45·5	86·50	16	18 5 26·73	27 53 35·4	12·57
17	16 10 1·61	23 50 24·5	85·25	17	18 8 0·23	27 54 50·8	10·80
18	16 12 21·02	23 58 56·0	84·00	18	18 10 33·87	27 55 55·6	9·03
19	16 14 40·83	24 7 20·0	82·73	19	18 13 7·63	27 56 49·8	7·25
20	16 17 1·04	24 15 36·4	81·43	20	18 15 41·51	27 57 33·3	5·47
21	16 19 21·64	24 23 45·0	80·13	21	18 18 15·50	27 58 6·1	3·68
22	16 21 42·64	24 31 45·8	78·82	22	18 20 49·60	27 58 28·2	1·90
23	16 24 4·04	24 39 38·7	77·48	23	18 23 23·79	27 58 39·6	0·10
24	16 26 25·83	S. 24 47 23·6		24	18 25 58·06	S. 27 58 40·2	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 13.		
	h m s	° ′ ″	″
0	18 25 58·06	S. 27 58 40·2	1·68
1	18 28 32·41	27 58 30·1	3·50
2	18 31 6·82	27 58 9·1	5·28
3	18 33 41·28	27 57 37·4	7·08
4	18 36 15·79	27 56 54·9	8·90
5	18 38 50·34	27 56 1·5	10·68
6	18 41 24·92	27 54 57·4	12·50
7	18 43 59·53	27 53 42·4	14·30
8	18 46 34·14	27 52 16·6	16·10
9	18 49 8·75	27 50 40·0	17·92
10	18 51 43·36	27 48 52·5	19·70
11	18 54 17·96	27 46 54·3	21·52
12	18 56 52·53	27 44 45·2	23·32
13	18 59 27·07	27 42 25·3	25·12
14	19 2 1·57	27 39 54·6	26·92
15	19 4 36·02	27 37 13·1	28·70
16	19 7 10·41	27 34 20·9	30·50
17	19 9 44·73	27 31 17·9	32·28
18	19 12 18·98	27 28 4·2	34·08
19	19 14 53·15	27 24 39·7	35·85
20	19 17 27·22	27 21 4·6	37·63
21	19 20 1·19	27 17 18·8	39·40
22	19 22 35·06	27 13 22·4	41·18
23	19 25 8·81	S. 27 9 15·3	42·93
	WEDNESDAY 14.		
0	19 27 42·43	S. 27 4 57·7	44·70
1	19 30 15·92	27 0 29·5	46·45
2	19 32 49·27	26 55 50·8	48·18
3	19 35 22·48	26 51 1·7	49·95
4	19 37 55·53	26 46 2·0	51·67
5	19 40 28·42	26 40 52·0	53·38
6	19 43 1·14	26 35 31·7	55·12
7	19 45 33·69	26 30 1·0	56·83
8	19 48 6·05	26 24 20·0	58·52
9	19 50 38·23	26 18 28·9	60·23
10	19 53 10·21	26 12 27·5	61·92
11	19 55 41·99	26 6 16·0	63·60
12	19 58 13·56	25 59 54·4	65·27
13	20 0 44·92	25 53 22·8	66·93
14	20 3 16·06	25 46 41·2	68·58
15	20 5 46·97	25 39 49·7	70·22
16	20 8 17·66	25 32 48·4	71·87
17	20 10 48·11	25 25 37·2	73·48
18	20 13 18·32	25 18 16·3	75·10
19	20 15 48·28	25 10 45·7	76·70
20	20 18 18·00	25 3 5·5	78·28
21	20 20 47·46	24 55 15·8	79·88
22	20 23 16·66	24 47 16·5	81·45
23	20 25 45·60	24 39 7·8	83·00
24	20 28 14·27	S. 24 30 49·8	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 15.		
	h m s	° ′ ″	″
0	20 28 14·27	S. 24 30 49·8	84·55
1	20 30 42·67	24 22 22·5	86·10
2	20 33 10·80	24 13 45·9	87·62
3	20 35 38·65	24 5 0·2	89·13
4	20 38 6·22	23 56 5·4	90·63
5	20 40 33·50	23 47 1·6	92·12
6	20 43 0·50	23 37 48·9	93·60
7	20 45 27·21	23 28 27·3	95·05
8	20 47 53·62	23 18 57·0	96·50
9	20 50 19·74	23 9 18·0	97·95
10	20 52 45·56	22 59 30·3	99·38
11	20 55 11·08	22 49 34·0	100·78
12	20 57 36·30	22 39 29·3	102·18
13	21 0 1·22	22 29 16·2	103·57
14	21 2 25·83	22 18 54·8	104·95
15	21 4 50·13	22 8 25·1	106·30
16	21 7 14·13	21 57 47·3	107·63
17	21 9 37·82	21 47 1·5	108·97
18	21 12 1·20	21 36 7·7	110·30
19	21 14 24·27	21 25 5·9	111·60
20	21 16 47·04	21 13 56·3	112·88
21	21 19 9·49	21 2 39·0	114·15
22	21 21 31·63	20 51 14·1	115·42
23	21 23 53·45	S. 20 39 41·6	116·67
	FRIDAY 16.		
0	21 26 14·97	S. 20 28 1·6	117·90
1	21 28 36·18	20 16 14·2	119·10
2	21 30 57·07	20 4 19·6	120·32
3	21 33 17·66	19 52 17·7	121·50
4	21 35 37·94	19 40 8·7	122·68
5	21 37 57·91	19 27 52·6	123·83
6	21 40 17·58	19 15 29·6	124·98
7	21 42 36·94	19 2 59·7	126·10
8	21 44 55·99	18 50 23·1	127·23
9	21 47 14·74	18 37 39·7	128·32
10	21 49 33·19	18 24 49·8	129·40
11	21 51 51·34	18 11 53·4	130·48
12	21 54 9·19	17 58 50·5	131·53
13	21 56 26·75	17 45 41·3	132·57
14	21 58 44·01	17 32 25·9	133·60
15	22 1 0·98	17 19 4·3	134·60
16	22 3 17·66	17 5 36·	
17	22 5 34·05	16 52 ·	
18	22 7 50·16	16 38 ·	
19	22 10 5·98	16 24	
20	22 12 21·53	16 1·	
21	22 14 36·80	15	
22	22 16 51·80		
23	22 19 6·52		
24	22 21 20·96		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 17.				*MONDAY* 19.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	22 21 20·99	S. 15 14 28·4	143·02	0	0 4 57·83	S. 2 37 32·3	167·03
1	22 23 35·18	15 0 10·3	143·87	1	0 7 4·27	2 20 50·1	167·17
2	22 25 49·12	14 45 47·1	144·72	2	0 9 10·67	2 4 7·1	167·28
3	22 28 2·79	14 31 18·8	145·53	3	0 11 17·04	1 47 23·4	167·37
4	22 30 16·21	14 16 45·6	146·35	4	0 13 23·37	1 30 39·2	167·45
5	22 32 29·38	14 2 7·5	147·15	5	0 15 29·67	1 13 54·5	167·52
6	22 34 42·30	13 47 24·6	147·93	6	0 17 35·95	0 57 9·4	167·57
7	22 36 54·98	13 32 37·0	148·70	7	0 19 42·21	0 40 24·0	167·61
8	22 39 7·42	13 17 44·8	149·45	8	0 21 48·46	0 23 38·3	167·63
9	22 41 19·62	13 2 48·1	150·18	9	0 23 54·70	S. 0 6 52·5	167·62
10	22 43 31·60	12 47 47·0	150·92	10	0 26 0·94	N. 0 9 53·2	167·62
11	22 45 43·34	12 32 41·5	151·62	11	0 28 7·18	0 26 38·9	167·60
12	22 47 54·86	12 17 31·8	152·30	12	0 30 13·43	0 43 24·5	167·55
13	22 50 6·16	12 2 18·0	152·98	13	0 32 19·69	1 0 9·8	167·50
14	22 52 17·24	11 47 0·1	153·65	14	0 34 25·97	1 16 54·8	167·42
15	22 54 28·11	11 31 38·2	154·28	15	0 36 32·28	1 33 39·3	167·33
16	22 56 38·77	11 16 12·5	154·92	16	0 38 38·61	1 50 23·3	167·23
17	22 58 49·23	11 0 43·0	155·53	17	0 40 44·97	2 7 6·7	167·10
18	23 0 59·49	10 45 9·8	156·12	18	0 42 51·37	2 23 49·3	166·98
19	23 3 9·56	10 29 33·1	156·72	19	0 44 57·82	2 40 31·2	166·83
20	23 5 19·43	10 13 52·8	157·28	20	0 47 4·31	2 57 12·2	166·65
21	23 7 29·12	9 58 9·1	157·83	21	0 49 10·85	3 13 52·1	166·48
22	23 9 38·63	9 42 22·1	158·38	22	0 51 17·45	3 30 31·0	166·28
23	23 11 47·96	S. 9 26 31·8	158·90	23	0 53 24·12	N. 3 47 8·7	166·08
	SUNDAY 18.				*TUESDAY* 20.		
0	23 13 57·11	S. 9 10 38·4	159·40	0	0 55 30·85	N. 4 3 45·2	165·85
1	23 16 6·10	8 54 42·0	159·90	1	0 57 37·66	4 20 20·3	165·60
2	23 18 14·93	8 38 42·6	160·38	2	0 59 44·54	4 36 53·9	165·35
3	23 20 23·60	8 22 40·3	160·85	3	1 1 51·50	4 53 26·0	165·07
4	23 22 32·11	8 6 35·2	161·28	4	1 3 58·55	5 9 56·4	164·78
5	23 24 40·48	7 50 27·5	161·72	5	1 6 5·69	5 26 25·1	164·48
6	23 26 48·71	7 34 17·2	162·13	6	1 8 12·92	5 42 52·0	164·15
7	23 28 56·80	7 18 4·4	162·55	7	1 10 20·26	5 59 16·9	163·82
8	23 31 4·75	7 1 49·1	162·93	8	1 12 27·70	6 15 39·8	163·47
9	23 33 12·57	6 45 31·5	163·28	9	1 14 35·25	6 32 0·6	163·10
10	23 35 20·27	6 29 11·8	163·65	10	1 16 42·92	6 48 19·2	162·70
11	23 37 27·85	6 12 49·9	164·00	11	1 18 50·70	7 4 35·4	162·32
12	23 39 35·31	5 56 25·9	164·32	12	1 20 58·60	7 20 49·3	161·90
13	23 41 42·66	5 40 0·0	164·63	13	1 23 6·63	7 37 0·7	161·45
14	23 43 49·91	5 23 32·2	164·92	14	1 25 14·80	7 53 9·4	161·02
15	23 45 57·07	5 7 2·7	165·20	15	1 27 23·09	8 9 15·5	160·55
16	23 48 4·13	4 50 31·5	165·47	16	1 29 31·53	8 25 18·8	160·08
17	23 50 11·10	4 33 58·7	165·72	17	1 31 40·11	8 41 19·3	159·57
18	23 52 17·98	4 17 24·4	165·95	18	1 33 48·84	8 57 16·7	159·07
19	23 54 24·79	4 0 48·7	166·17	19	1 35 57·73	9 13 11·1	158·55
20	23 56 31·52	3 44 11·7	166·38	20	1 38 6·77	9 29 2·4	158·00
21	23 58 38·19	3 27 33·4	166·57	21	1 40 15·96	9 44 50·4	157·43
22	0 0 44·79	3 10 54·0	166·73	22	1 42 25·32	10 0 35·0	156·87
23	0 2 51·34	2 54 13·6	166·90	23	1 44 34·85	10 16 16·2	156·28
24	0 4 57·83	S. 2 37 32·3		24	1 46 44·55	N. 10 31 53·9	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 21.		
	h m s	° ′ ″	″
0	1 46 44·55	N.10 31 53·9	155·68
1	1 48 54·43	10 47 28·0	155·05
2	1 51 4·48	11 2 58·3	154·42
3	1 53 14·72	11 18 24·8	153·77
4	1 55 25·14	11 33 47·4	153·10
5	1 57 35·75	11 49 6·0	152·42
6	1 59 46·56	12 4 20·5	151·70
7	2 1 57·56	12 19 30·7	151·00
8	2 4 8·76	12 34 36·7	150·27
9	2 6 20·16	12 49 38·3	149·52
10	2 8 31·77	13 4 35·4	148·77
11	2 10 43·58	13 19 28·0	147·98
12	2 12 55·61	13 34 15·9	147·18
13	2 15 7·85	13 48 59·0	146·38
14	2 17 20·31	14 3 37·3	145·55
15	2 19 32·98	14 18 10·6	144·72
16	2 21 45·88	14 32 38·9	143·85
17	2 23 59·00	14 47 2·0	142·98
18	2 26 12·35	15 1 19·9	142·10
19	2 28 25·93	15 15 32·5	141·20
20	2 30 39·74	15 29 39·7	140·28
21	2 32 53·78	15 43 41·4	139·35
22	2 35 8·05	15 57 37·5	138·40
23	2 37 22·56	N.16 11 27·9	137·43
	THURSDAY 22.		
0	2 39 37·31	N.16 25 12·5	136·47
1	2 41 52·30	16 38 51·3	135·47
2	2 44 7·53	16 52 24·1	134·47
3	2 46 23·00	17 5 50·9	133·43
4	2 48 38·72	17 19 11·5	132·40
5	2 50 54·69	17 32 25·9	131·35
6	2 53 10·90	17 45 34·0	130·28
7	2 55 27·35	17 58 35·7	129·20
8	2 57 44·05	18 11 31·0	128·12
9	3 0 1·00	18 24 19·7	127·00
10	3 2 18·20	18 37 1·7	125·88
11	3 4 35·64	18 49 37·0	124·73
12	3 6 53·34	19 2 5·4	123·58
13	3 9 11·29	19 14 26·9	122·43
14	3 11 29·48	19 26 41·5	121·25
15	3 13 47·92	19 38 49·0	120·05
16	3 16 6·61	19 50 49·3	118·85
17	3 18 25·55	20 2 42·4	117·62
18	3 20 44·74	20 14 28·1	116·38
19	3 23 4·17	20 26 6·4	115·13
20	3 25 23·85	20 37 37·2	113·88
21	3 27 43·77	20 49 0·5	112·62
22	3 30 3·94	21 0 16·2	111·32
23	3 32 24·34	21 11 24·1	110·02
24	3 34 44·99	N.21 22 24·2	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 23.		
	h m s	° ′ ″	″
0	3 34 44·99	N.21 22 24·2	108·70
1	3 37 5·88	21 33 16·4	107·38
2	3 39 27·00	21 44 0·7	106·05
3	3 41 48·36	21 54 37·0	104·70
4	3 44 9·96	22 5 5·2	103·33
5	3 46 31·78	22 15 25·2	101·97
6	3 48 53·84	22 25 37·0	100·58
7	3 51 16·12	22 35 40·5	99·18
8	3 53 38·62	22 45 35·6	97·77
9	3 56 1·34	22 55 22·2	96·37
10	3 58 24·28	23 5 0·4	94·93
11	4 0 47·44	23 14 30·0	93·50
12	4 3 10·81	23 23 51·0	92·05
13	4 5 34·39	23 33 3·3	90·58
14	4 7 58·17	23 42 6·8	89·12
15	4 10 22·15	23 51 1·5	87·65
16	4 12 46·33	23 59 47·4	86·15
17	4 15 10·70	24 8 24·3	84·65
18	4 17 35·26	24 16 52·2	83·15
19	4 20 0·00	24 25 11·1	81·63
20	4 22 24·93	24 33 20·9	80·10
21	4 24 50·03	24 41 21·5	78·58
22	4 27 15·29	24 49 13·0	77·03
23	4 29 40·72	N.24 56 55·2	75·50
	SATURDAY 24.		
0	4 32 6·32	N.25 4 28·2	73·93
1	4 34 32·07	25 11 51·8	72·38
2	4 36 57·97	25 19 6·1	70·80
3	4 39 24·01	25 26 10·9	69·22
4	4 41 50·19	25 33 6·2	67·65
5	4 44 16·51	25 39 52·1	66·05
6	4 46 42·95	25 46 28·4	64·45
7	4 49 9·51	25 52 55·1	62·87
8	4 51 36·19	25 59 12·3	61·25
9	4 54 2·98	26 5 19·8	59·63
10	4 56 29·88	26 11 17·6	58·02
11	4 58 56·87	26 17 5·7	56·40
12	5 1 23·95	26 22 44·1	54·77
13	5 3 51·12	26 28 12·7	53·13
14	5 6 18·36	26 33 31·5	51·52
15	5 8 45·68	26 38 40·6	49·87
16	5 11 13·06	26 43 [illegible]	48·22
17	5 13 40·49	26 4[illegible]	·58
18	5 16 7·98	26 [illegible]	·93
19	5 18 35·51	2[illegible]	30
20	5 21 3·08		63
21	5 23 30·67		·18
22	5 25 58·2[illegible]		
23	5 28 25·9		
24	5 30 53·5		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 25.		
	h m s	° ′ ″	″
0	5 30 53·57	N.27 17 37·8	35·02
1	5 33 21·21	27 21 7·9	33·37
2	5 35 48·85	27 24 28·1	31·72
3	5 38 16·47	27 27 38·4	30·05
4	5 40 44·07	27 30 38·7	28·40
5	5 43 11·64	27 33 29·1	26·75
6	5 45 39·17	27 36 9·6	25·08
7	5 48 6·66	27 38 40·1	23·45
8	5 50 34·10	27 41 0·8	21·78
9	5 53 1·48	27 43 11·5	20·13
10	5 55 28·79	27 45 12·3	18·48
11	5 57 56·03	27 47 3·2	16·83
12	6 0 23·19	27 48 44·2	15·20
13	6 2 50·26	27 50 15·4	13·55
14	6 5 17·24	27 51 36·7	11·92
15	6 7 44·11	27 52 48·2	10·28
16	6 10 10·87	27 53 49·9	8·65
17	6 12 37·51	27 54 41·8	7·02
18	6 15 4·02	27 55 23·9	5·40
19	6 17 30·40	27 55 56·3	3·78
20	6 19 56·64	27 56 19·0	2·17
21	6 22 22·74	27 56 32·0	0·57
22	6 24 48·68	27 56 35·4	1·05
23	6 27 14·46	N.27 56 29·1	2·63
	MONDAY 26.		
0	6 29 40·08	N.27 56 13·3	4·23
1	6 32 5·52	27 55 47·9	5·82
2	6 34 30·78	27 55 13·0	7·40
3	6 36 55·85	27 54 28·6	8·97
4	6 39 20·72	27 53 34·8	10·55
5	6 41 45·39	27 52 31·5	12·10
6	6 44 9·86	27 51 18·9	13·65
7	6 46 34·12	27 49 57·0	15·20
8	6 48 58·15	27 48 25·8	16·73
9	6 51 21·96	27 46 45·4	18·27
10	6 53 45·54	27 44 55·8	19·78
11	6 56 8·88	27 42 57·1	21·32
12	6 58 31·97	27 40 49·2	22·82
13	7 0 54·82	27 38 32·3	24·30
14	7 3 17·41	27 36 6·5	25·80
15	7 5 39·75	27 33 31·7	27·28
16	7 8 1·82	27 30 48·0	28·77
17	7 10 23·61	27 27 55·4	30·22
18	7 12 45·13	27 24 54·1	31·67
19	7 15 6·38	27 21 44·1	33·12
20	7 17 27·34	27 18 25·4	34·55
21	7 19 48·01	27 14 58·1	35·98
22	7 22 8·38	27 11 22·2	37·40
23	7 24 28·46	27 7 37·8	38·82
24	*7 26 48·23*	N.27 3 44·9	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 27.		
	h m s	° ′ ″	″
0	7 26 48·23	N.27 3 44·9	40·20
1	7 29 7·70	26 59 43·7	41·60
2	7 31 26·85	26 55 34·1	42·97
3	7 33 45·69	26 51 16·3	44·33
4	7 36 4·22	26 46 50·3	45·70
5	7 38 22·42	26 42 16·1	47·03
6	7 40 40·29	26 37 33·9	48·38
7	7 42 57·84	26 32 43·6	49·72
8	7 45 15·06	26 27 45·4	51·02
9	7 47 31·94	26 22 39·3	52·32
10	7 49 48·49	26 17 25·4	53·62
11	7 52 4·69	26 12 3·7	54·90
12	7 54 20·56	26 6 34·3	56·17
13	7 56 36·08	26 0 57·3	57·43
14	7 58 51·26	25 55 12·7	58·67
15	8 1 6·08	25 49 20·7	59·91
16	8 3 20·56	25 43 21·2	61·15
17	8 5 34·69	25 37 14·3	62·35
18	8 7 48·46	25 31 0·2	63·57
19	8 10 1·87	25 24 38·8	64·77
20	8 12 14·93	25 18 10·2	65·95
21	8 14 27·64	25 11 34·5	67·12
22	8 16 39·98	25 4 51·8	68·27
23	8 18 51·97	N.24 58 2·2	69·43
	WEDNESDAY 28.		
0	8 21 3·59	N.24 51 5·6	70·57
1	8 23 14·85	24 44 2·2	71·68
2	8 25 25·75	24 36 52·1	72·81
3	8 27 36·29	24 29 35·2	73·92
4	8 29 46·46	24 22 11·7	75·00
5	8 31 56·27	24 14 41·7	76·10
6	8 34 5·71	24 7 5·1	77·17
7	8 36 14·80	23 59 22·1	78·22
8	8 38 23·52	23 51 32·8	79·28
9	8 40 31·87	23 43 37·1	80·32
10	8 42 39·87	23 35 35·2	81·33
11	8 44 47·50	23 27 27·2	82·37
12	8 46 54·77	23 19 13·0	83·37
13	8 49 1·68	23 10 52·8	84·37
14	8 51 8·23	23 2 26·6	85·35
15	8 53 14·42	22 53 54·5	86·32
16	8 55 20·25	22 45 16·6	87·28
17	8 57 25·73	22 36 32·9	88·23
18	8 59 30·85	22 27 43·5	89·18
19	9 1 35·61	22 18 48·4	90·10
20	9 3 40·03	22 9 47·8	91·05
21	9 5 44·09	22 0 41·6	91·93
22	9 7 47·80	21 51 30·0	92·83
23	9 9 51·17	21 42 13·0	93·72
24	9 11 54·19	N.21 32 50·7	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 29.				*FRIDAY* 30.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	9 11 54·19	N.21 32 50·7	94·60	0	9 59 28·89	N.17 23 51·2	112·75
1	9 13 56·87	21 23 23·1	95·47	1	10 1 24·06	17 12 34·7	113·38
2	9 15 59·20	21 13 50·3	96·32	2	10 3 18·96	17 1 14·4	114·02
3	9 18 1·20	21 4 12·4	97·17	3	10 5 13·58	16 49 50·3	114·65
4	9 20 2·86	20 54 29·4	98·02	4	10 7 7·94	16 38 22·4	115·25
5	9 22 4·18	20 44 41·3	98·83	5	10 9 2·03	16 26 50·9	115·87
6	9 24 5·17	20 34 48·3	99·65	6	10 10 55·86	16 15 15·7	116·47
7	9 26 5·82	20 24 50·4	100·47	7	10 12 49·44	16 3 36·9	117·05
8	9 28 6·15	20 14 47·6	101·25	8	10 14 42·76	15 51 54·6	117·63
9	9 30 6·15	20 4 40·1	102·05	9	10 16 35·83	15 40 8·8	118·20
10	9 32 5·83	19 54 27·8	102·82	10	10 18 28·66	15 28 19·6	118·77
11	9 34 5·19	19 44 10·9	103·60	11	10 20 21·24	15 16 27·0	119·33
12	9 36 4·22	19 33 49·3	104·35	12	10 22 13·59	15 4 31·0	119·87
13	9 38 2·94	19 23 23·2	105·10	13	10 24 5·70	14 52 31·8	120·42
14	9 40 1·35	19 12 52·6	105·85	14	10 25 57·58	14 40 29·3	120·95
15	9 41 59·45	19 2 17·5	106·57	15	10 27 49·24	14 28 23·6	121·48
16	9 43 57·24	18 51 38·1	107·30	16	10 29 40·68	14 16 14·7	122·00
17	9 45 54·73	18 40 54·3	108·00	17	10 31 31·89	14 4 2·7	122·50
18	9 47 51·91	18 30 6·3	108·72	18	10 33 22·89	13 51 47·7	123·00
19	9 49 48·80	18 19 14·0	109·42	19	10 35 13·68	13 39 29·7	123·50
20	9 51 45·40	18 8 17·5	110·08	20	10 37 4·27	13 27 8·7	124·00
21	9 53 41·70	17 57 17·0	110·77	21	10 38 54·65	13 14 44·7	124·47
22	9 55 37·71	17 46 12·4	111·43	22	10 40 44·83	13 2 17·9	124·95
23	9 57 33·44	17 35 3·8	112·10	23	10 42 34·82	12 49 48·2	125·42
24	9 59 28·89	N.17 23 51·2		24	10 44 24·61	N.12 37 15·7	

PHASES OF THE MOON.

		d	h	m
☾	*Last Quarter*	1	5	16·8
●	New Moon	9	7	31·0
☽	*First Quarter*	16	11	15·0
○	Full Moon	23	7	51·4

		d	h
☾	Apogee	3	10
☾	Perigee	18	23

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Aldebaran W.	59 12 58	3076	60 41 37	3082	62 10 9	3087	63 38 34	3092
	Saturn W.	36 56 7	3056	38 25 10	3060	39 54 8	3064	41 23 2	3068
	Pollux W.	14 51 10	3034	16 20 41	3038	17 50 7	3043	19 19 27	3047
	Mars E.	31 17 24	3243	29 52 6	3253	28 27 0	3263	27 2 5	3272
	Venus E.	55 42 12	3159	54 15 14	3168	52 48 27	3177	51 21 51	3187
	Sun E.	92 25 1	3390	91 2 33	3398	89 40 14	3407	88 18 5	3414
2	Aldebaran W.	70 59 15	3113	72 27 9	3115	73 55 0	3119	75 22 47	3120
	Saturn W.	48 46 25	3083	50 14 56	3086	51 43 23	3087	53 11 49	3089
	Pollux W.	26 44 46	3068	28 13 35	3070	29 42 21	3073	31 11 3	3076
	Venus E.	44 11 19	3224	42 45 38	3230	41 20 5	3236	39 54 38	3241
	Sun E.	81 29 9	3443	80 7 41	3447	78 46 17	3450	77 24 57	3453
3	Aldebaran W.	82 41 17	3124	84 8 57	3125	85 36 36	3124	87 4 17	3123
	Saturn W.	60 33 39	3090	62 2 1	3089	63 30 24	3088	64 58 48	3086
	Pollux W.	38 34 2	3081	40 2 35	3081	41 31 8	3080	42 59 42	3078
	Venus E.	32 48 55	3264	31 24 2	3268	29 59 13	3272	28 34 29	3276
	Sun E.	70 38 58	3461	69 17 50	3461	67 56 42	3461	66 35 34	3459
4	Aldebaran W.	94 23 9	3112	95 51 4	3108	97 19 4	3105	98 47 7	3101
	Saturn W.	72 21 30	3073	73 50 13	3068	75 19 2	3064	76 47 55	3059
	Pollux W.	50 23 4	3067	51 51 54	3063	53 20 49	3060	54 49 48	3055
	Sun E.	59 49 25	3448	58 28 3	3444	57 6 36	3439	55 45 4	3435
5	Saturn W.	84 13 57	3031	85 43 31	3025	87 13 13	3018	88 43 3	3010
	Pollux W.	62 16 16	3028	63 45 54	3021	65 15 41	3014	66 45 36	3008
	Regulus W.	26 0 57	3089	27 29 20	3076	28 57 59	3064	30 26 52	3053
	Sun E.	48 55 59	3406	47 33 49	3400	46 11 32	3392	44 49 6	3385
6	Saturn W.	96 14 34	2972	97 45 22	2963	99 16 21	2954	100 47 31	2946
	Pollux W.	74 17 28	2968	75 48 21	2959	77 19 25	2951	78 50 39	2942
	Regulus W.	37 54 43	2999	39 24 57	2988	40 55 25	2977	42 26 6	2967
	Sun E.	37 54 43	3343	36 31 21	3333	35 7 48	3325	33 44 5	3315
12	Sun W.	32 49 39	2851	34 23 1	2842	35 56 34	2835	37 30 17	2826
	Jupiter E.	61 30 37	2549	59 50 32	2543	58 10 18	2535	56 29 54	2528
	Fomalhaut E.	69 36 4	2722	67 59 53	2719	66 23 38	2718	64 47 22	2717
	α Pegasi E.	90 38 27	2867	89 5 26	2860	87 32 16	2854	85 58 58	2848
13	Sun W.	45 21 24	2789	46 56 6	2782	48 30 57	2775	50 5 58	2769
	Jupiter E.	48 5 41	2499	46 24 26	2493	44 43 3	2488	43 1 33	2484
	Fomalhaut E.	56 46 1	2725	55 9 55	2730	53 33 55	2736	51 58 3	2744
	α Pegasi E.	78 10 53	2831	76 37 5	2829	75 3 15	2828	73 29 24	2829
14	Sun W.	58 3 13	2736	59 39 5	2730	61 15 5	2723	62 51 14	2718
	Jupiter E.	34 32 29	2464	32 50 25	2461	31 8 17	2459	29 26 6	2458
	Fomalhaut E.	44 2 8	2813	42 27 57	2836	40 54 16	2862	39 21 8	2891
	α Pegasi E.	65 40 50	2848	64 7 24	2856	62 34 8	2865	61 1 4	2875
	α Arietis E.	106 45 11	2474	105 3 21	2467	103 21 21	2460	101 39 12	2454
15	Sun W.	70 53 54	2689	72 30 49	2684	74 7 51	2678	75 45 0	2672
	α Pegasi E.	53 19 50	2957	51 48 43	2981	50 18 7	3009	48 48 5	3040
	α Arietis E.	93 6 16	2425	91 23 17	2419	89 40 10	2414	87 56 56	2410
16	Sun W.	83 52 32	2647	85 30 23	2643	87 8 20	2638	88 46 23	2633

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Aldebaran W.	65 6 53	3097	66 35 6	3101	68 3 14	3105	69 31 17	3109
	Saturn W.	42 51 51	3072	44 20 35	3075	45 49 15	3078	47 17 52	3081
	Pollux W.	20 48 42	3051	22 17 51	3056	23 46 54	3060	25 15 53	3065
	Mars E.	25 37 21	3281	24 12 47	3290	22 48 24	3300	21 24 12	3309
	Venus E.	49 55 26	3195	48 29 11	3203	47 3 5	3210	45 37 8	3217
	Sun E.	86 56 4	3420	85 34 10	3426	84 12 23	3432	82 50 43	3438
2	Aldebaran W.	76 50 32	3121	78 18 16	3124	79 45 57	3124	81 13 37	3124
	Saturn W.	54 40 12	3089	56 8 35	3091	57 36 56	3090	59 5 18	3091
	Pollux W.	32 39 42	3078	34 8 19	3078	35 36 55	3080	37 5 29	3081
	Venus E.	38 29 18	3247	37 4 4	3252	35 38 56	3256	34 13 53	3260
	Sun E.	76 3 40	3456	74 42 27	3457	73 21 15	3460	72 0 6	3461
3	Aldebaran W.	88 31 59	3121	89 59 43	3119	91 27 29	3118	92 55 17	3115
	Saturn W.	66 27 15	3084	67 55 44	3082	69 24 16	3079	70 52 51	3076
	Pollux W.	44 28 18	3078	45 56 55	3075	47 25 35	3073	48 54 18	3070
	Venus E.	27 9 49	3280	25 45 14	3284	24 20 44	3289	22 56 20	3294
	Sun E.	65 14 24	3458	63 53 13	3456	62 32 0	3454	61 10 44	3451
4	Aldebaran W.	100 15 16	3097	101 43 29	3092	103 11 48	3087	104 40 13	3082
	Saturn W.	78 16 55	3055	79 46 0	3049	81 15 12	3043	82 44 31	3038
	Pollux W.	56 18 53	3050	57 48 4	3045	59 17 21	3039	60 46 45	3034
	Sun E.	54 23 27	3430	53 1 45	3424	51 39 56	3419	50 18 1	3413
5	Saturn W.	90 13 3	3004	91 43 11	2996	93 13 29	2988	94 43 57	2981
	Pollux W.	68 15 39	3000	69 45 52	2993	71 16 14	2985	72 46 46	2977
	Regulus W.	31 55 59	3042	33 25 20	3031	34 54 55	3021	36 24 42	3010
	Sun E.	43 26 32	3377	42 3 49	3369	40 40 57	3360	39 17 55	3352
6	Saturn W.	102 18 51	2936	103 50 24	2928	105 22 7	2919	106 54 2	2909
	Pollux W.	80 22 5	2932	81 53 43	2923	83 25 32	2913	84 57 34	2904
	Regulus W.	43 57 0	2957	45 28 7	2946	46 59 28	2935	48 31 2	2924
	Sun E.	32 20 11	3305	30 56 5	3295	29 31 48	3285	28 7 19	3276
12	Sun W.	39 4 11	2819	40 38 14	2811	42 12 28	2804	43 46 51	2796
	Jupiter E.	54 49 20	2522	53 8 38	2516	51 27 47	2510	49 46 48	2504
	Fomalhaut E.	63 11 4	2716	61 34 45	2717	59 58 28	2719	58 22 13	2721
	α Pegasi E.	84 25 32	2843	82 52 0	2838	81 18 22	2835	79 44 39	2832
13	Sun W.	51 41 7	2761	53 16 26	2755	54 51 53	2748	56 27 29	2742
	Jupiter E.	41 19 57	2478	39 38 13	2474	37 56 24	2470	36 14 29	2467
	Fomalhaut E.	50 22 22	2753	48 46 53	2765	47 11 39	2779	45 36 43	2795
	α Pegasi E.	71 55 34	2831	70 21 47	2834	68 48 3	2837	67 14 23	2842
14	Sun W.	64 27 30	2711	66 3 55	2706	67 40 27	2700	69 17 7	2695
	Jupiter E.	27 43 53	2458	26 1 40	2459	24 19 29	2461	22 37 21	2465
	Fomalhaut E.	37 48 38	2927	36 16 54	2969	34 46 2	3018	33 16 11	3075
	α Pegasi E.	59 28 13	2887	57 55 37	2901	56 23 20	2917	54 51 23	2936
	α Arietis E.	99 56 54	2448	98 14 27	2441	96 31 51	2436	94 49 8	2430
15	Sun W.	77 22 17	2668	78 59 40	2662	80 37 11	2657	82 14 48	2
	α Pegasi E.	47 18 42	3075	45 50 2	3116	44 22 12	3162	42 55 1	
	α Arietis E.	86 13 35	2405	84 30 8	2400	82 46 34	2396	81 2 [illegible]	
16	Sun W.	90 24 33	2629	92 2 48	2624	93 41 10	2621	95 19 [illegible]	

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
16	α Pegasi E.	41 29 24	3273	40 4 41	3341	38 41 17	3420	37 19 23	3509
	α Arietis E.	79 19 9	2388	77 35 17	2385	75 51 21	2382	74 7 20	2378
	Aldebaran E.	109 37 28	2375	107 53 18	2370	106 9 0	2365	104 24 35	2360
17	Sun W.	96 58 10	2612	98 36 48	2608	100 15 32	2604	101 54 21	2601
	α Aquilæ W.	45 41 32	4373	46 47 18	4247	47 55 0	4134	49 4 29	4031
	α Arietis E.	65 26 15	2367	63 41 53	2366	61 57 29	2365	60 13 4	2365
	Aldebaran E.	95 40 42	2337	93 55 37	2333	92 10 26	2330	90 25 10	2326
	Saturn E.	117 5 54	2297	115 19 50	2292	113 33 39	2289	111 47 22	2285
18	Sun W.	110 9 32	2586	111 48 46	2583	113 28 4	2582	115 7 24	2580
	α Aquilæ W.	55 14 40	3640	56 32 31	3581	57 51 26	3528	59 11 19	3479
	Jupiter W.	21 45 11	2360	23 29 43	2348	25 14 32	2339	26 59 34	2332
	α Arietis E.	51 31 5	2371	49 46 48	2374	48 2 36	2378	46 18 30	2384
	Aldebaran E.	81 37 41	2313	79 52 0	2311	78 6 16	2309	76 20 30	2309
	Saturn E.	102 54 35	2267	101 7 47	2265	99 20 56	2262	97 34 0	2260
19	Sun W.	123 24 40	2573	125 4 12	2574	126 43 43	2573	128 23 15	2573
	α Aquilæ W.	66 2 58	3293	67 27 18	3265	68 52 10	3241	70 17 31	3219
	Jupiter W.	35 46 57	2309	37 32 44	2306	39 18 35	2304	41 4 28	2302
	Fomalhaut W.	32 59 9	2907	34 31 19	2850	36 4 42	2800	37 39 10	2757
	α Arietis E.	37 40 32	2432	35 57 43	2447	34 15 15	2465	32 33 13	2488
	Aldebaran E.	67 31 25	2307	65 45 36	2308	63 59 48	2310	62 14 3	2312
	Saturn E.	88 38 42	2253	86 51 33	2252	85 4 23	2252	83 17 13	2252
20	α Aquilæ W.	77 29 52	3143	78 57 10	3134	80 24 39	3127	81 52 16	3122
	Jupiter W.	49 54 13	2302	51 40 9	2304	53 26 3	2305	55 11 55	2307
	Fomalhaut W.	45 43 21	2615	47 21 56	2597	49 0 55	2581	50 40 16	2568
	Aldebaran E.	53 26 16	2330	51 41 1	2335	49 55 53	2342	48 10 55	2349
	Saturn E.	74 21 35	2258	72 34 33	2260	70 47 35	2262	69 0 40	2266
	Pollux E.	97 1 59	2257	95 14 56	2259	93 27 56	2261	91 40 59	2264
21	Jupiter W.	64 0 15	2324	65 45 40	2329	67 30 57	2334	69 16 7	2339
	Fomalhaut W.	59 0 45	2528	60 41 19	2524	62 21 59	2522	64 2 42	2520
	α Pegasi W.	41 25 13	3168	42 52 0	3116	44 19 50	3069	45 48 37	3030
	Aldebaran E.	39 29 14	2403	37 45 43	2417	36 2 33	2435	34 19 48	2454
	Saturn E.	60 7 30	2288	58 21 13	2294	56 35 4	2300	54 49 4	2307
	Pollux E.	82 47 22	2282	81 0 56	2287	79 14 37	2292	77 28 26	2298
22	Jupiter W.	77 59 46	2373	79 44 0	2381	81 28 2	2389	83 11 53	2398
	Fomalhaut W.	72 26 14	2529	74 6 47	2533	75 47 14	2539	77 27 33	2545
	α Pegasi W.	53 22 59	2897	54 55 22	2881	56 28 5	2867	58 1 6	2856
	Saturn E.	46 1 51	2349	44 17 3	2360	42 32 30	2371	40 48 14	2382
	Pollux E.	68 39 44	2332	66 54 31	2339	65 9 28	2348	63 24 38	2356
23	Jupiter W.	91 47 48	2447	93 30 16	2458	95 12 28	2469	96 54 25	2480
	Fomalhaut W.	85 46 44	2585	87 25 59	2596	89 4 59	2607	90 43 45	2618
	α Pegasi W.	65 48 49	2831	67 22 36	2831	68 56 23	2832	70 30 9	2835
	Saturn E.	32 11 31	2456	30 29 16	2475	28 47 28	2496	27 6 9	2519
	Pollux E.	54 43 45	2405	53 0 17	2416	51 17 5	2427	49 34 9	2438
	Regulus E.	91 17 52	2415	89 34 39	2425	87 51 40	2436	86 8 57	2448
	Mars E.	112 49 11	2576	111 9 43	2587	109 30 30	2599	107 51 33	2610
24	*Jupiter* W.	105 19 58	2543	107 0 12	2556	108 40 8	2569	110 19 45	2583

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
16	α Pegasi E.	35 59 9	3612	34 40 48	3732	33 24 35	3871	32 10 46	4034
	α Arietis E.	72 23 14	2376	70 39 5	2373	68 54 51	2371	67 10 34	2369
	Aldebaran E.	102 40 2	2355	100 55 22	2350	99 10 35	2346	97 25 42	2341
17	Sun W.	103 33 14	2598	105 12 12	2594	106 51 15	2591	108 30 22	2589
	α Aquilæ W.	50 15 38	3937	51 28 20	3852	52 42 29	3775	53 57 57	3704
	α Arietis E.	58 28 39	2364	56 44 13	2365	54 59 48	2366	53 15 25	2368
	Aldebaran E.	88 39 48	2323	86 54 22	2320	85 8 52	2317	83 23 18	2315
	Saturn E.	110 1 0	2280	108 14 31	2276	106 27 57	2274	104 41 19	2270
18	Sun W.	116 46 47	2577	118 26 13	2576	120 5 41	2575	121 45 10	2574
	α Aquilæ W.	60 32 6	3434	61 53 44	3394	63 16 7	3357	64 39 13	3323
	Jupiter W.	28 44 47	2326	30 30 9	2320	32 15 39	2316	34 1 15	2312
	α Arietis E.	44 34 32	2390	42 50 43	2398	41 7 6	2407	39 23 41	2418
	Aldebaran E.	74 34 43	2307	72 48 54	2306	71 3 4	2306	69 17 14	2307
	Saturn E.	95 47 2	2258	94 0 0	2256	92 12 56	2255	90 25 50	2254
19	Sun W.	130 2 47	2574	131 42 17	2575	133 21 46	2577	135 1 13	2578
	α Aquilæ W.	71 43 18	3199	73 9 28	3182	74 35 59	3167	76 2 48	3154
	Jupiter W.	42 50 24	2302	44 36 21	2302	46 22 18	2301	48 8 16	2302
	Fomalhaut W.	39 14 34	2720	40 50 47	2689	42 27 42	2661	44 5 15	2636
	α Arietis E.	30 51 43	2514	29 10 49	2546	27 30 40	2585	25 51 24	2632
	Aldebaran E.	60 28 21	2314	58 42 42	2317	56 57 8	2321	55 11 39	2325
	Saturn E.	81 30 3	2253	79 42 54	2253	77 55 45	2255	76 8 39	2256
20	α Aquilæ W.	83 19 59	3118	84 47 47	3117	86 15 36	3117	87 43 25	3119
	Jupiter W.	56 57 44	2310	58 43 29	2313	60 29 10	2317	62 14 45	2320
	Fomalhaut W.	52 19 55	2556	53 59 50	2547	55 39 58	2539	57 20 17	2533
	Aldebaran E.	46 26 7	2358	44 41 32	2367	42 57 10	2377	41 13 3	2390
	Saturn E.	67 13 51	2269	65 27 6	2273	63 40 27	2278	61 53 55	2283
	Pollux E.	89 54 6	2266	88 7 17	2270	86 20 33	2274	84 33 55	2277
21	Jupiter W.	71 1 9	2345	72 46 3	2352	74 30 47	2358	76 15 22	2366
	Fomalhaut W.	65 43 27	2520	67 24 12	2521	69 4 56	2523	70 45 37	2526
	α Pegasi W.	47 18 13	2995	48 48 32	2964	50 19 30	2938	51 51 0	2916
	Aldebaran E.	32 37 30	2476	30 55 43	2501	29 14 31	2530	27 33 59	2561
	Saturn E.	53 3 14	2315	51 17 36	2322	49 32 8	2330	47 46 53	2339
	Pollux E.	75 42 23	2304	73 56 29	2310	72 10 44	2317	70 25 9	2324
22	Jupiter W.	84 55 31	2407	86 38 56	2417	88 22 7	2426	90 5 5	2436
	Fomalhaut W.	79 7 44	2551	80 47 46	2559	82 27 37	2568	84 7 16	2576
	α Pegasi W.	59 34 21	2847	61 7 48	2841	62 41 23	2836	64 15 4	2833
	Saturn E.	39 4 14	2395	37 20 32	2409	35 37 10	2424	33 54 9	24
	Pollux E.	61 40 0	2366	59 55 36	2375	58 11 25	2384	56 27 28	
23	Jupiter W.	98 36 6	2492	100 17 30	2504	101 58 37	2517	103 39	
	Fomalhaut W.	92 22 15	2630	94 0 29	2643	95 38 26	2656	97 1	
	α Pegasi W.	72 3 51	2839	73 37 28	2845	75 10 58	2850	76	
	Saturn E.	25 25 22	2544	23 45 10	2573	22 5 38	2607	20	
	Pollux E.	47 51 29	2450	46 9 5	2462	44 26 59	2474		
	Regulus E.	84 26 31	2459	82 44 20	2472	81 2 27	2483		
	Mars E.	106 12 51	2622	104 34 26	2634	102 56 17	2646		
24	Jupiter W.	111 59 3	2597	113 38 2	2612	115 16 41	2625		

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Fomalhaut W.	98 53 25	2684	100 30 26	2699	102 7 7	2715	103 43 27	2731
	α Pegasi W.	78 17 34	2866	79 50 37	2874	81 23 29	2884	82 56 8	2895
	α Arietis W.	34 55 59	2686	36 32 58	2684	38 9 59	2684	39 47 0	2687
	Pollux E.	41 3 38	2500	39 22 25	2513	37 41 30	2526	36 0 53	2540
	Regulus E.	77 39 31	2509	75 58 30	2522	74 17 48	2535	72 37 24	2548
	Mars E.	99 40 51	2672	98 3 34	2685	96 26 34	2699	94 49 53	2713
25	α Arietis W.	47 50 42	2717	49 27 0	2725	51 3 7	2734	52 39 1	2744
	Aldebaran W.	18 21 28	3087	19 49 53	3030	21 19 29	2988	22 49 57	2957
	Pollux E.	27 42 41	2612	26 4 3	2627	24 25 44	2643	22 47 47	2658
	Regulus E.	64 20 7	2619	62 41 38	2633	61 3 28	2649	59 25 39	2663
	Mars E.	86 51 4	2784	85 16 15	2798	83 41 44	2813	82 7 33	2828
	Venus E.	113 16 42	2894	111 44 15	2909	110 12 8	2924	108 40 20	2941
26	α Arietis W.	60 35 5	2799	62 9 34	2811	63 43 47	2823	65 17 45	2835
	Aldebaran W.	30 29 2	2898	32 1 24	2896	33 33 48	2897	35 6 11	2899
	Regulus E.	51 21 31	2738	49 45 42	2753	48 10 12	2769	46 35 3	2784
	Mars E.	74 21 23	2901	72 49 6	2916	71 17 8	2931	69 45 28	2946
	Venus E.	101 6 22	3020	99 36 34	3036	98 7 6	3051	96 37 56	3067
	Spica ♍ E.	105 21 51	2724	103 45 43	2738	102 9 54	2753	100 34 24	2766
27	α Arietis W.	73 3 39	2896	74 36 3	2908	76 8 12	2920	77 40 5	2931
	Aldebaran W.	42 46 47	2928	44 18 30	2935	45 50 4	2944	47 21 27	2952
	Saturn W.	21 56 37	2942	23 28 3	2938	24 59 34	2938	26 31 5	2939
	Regulus E.	38 44 15	2860	37 11 5	2876	35 38 15	2891	34 5 45	2907
	Mars E.	62 11 41	3016	60 41 48	3030	59 12 12	3043	57 42 53	3056
	Venus E.	89 16 54	3143	87 49 37	3157	86 22 37	3172	84 55 54	3187
	Spica ♍ E.	92 41 24	2835	91 7 41	2847	89 34 14	2860	88 1 4	2873
	Sun E.	135 11 42	3202	133 45 35	3217	132 19 46	3230	130 54 12	3243
28	α Arietis W.	85 15 51	2989	86 46 18	2999	88 16 32	3010	89 46 32	3020
	Aldebaran W.	54 55 43	2995	56 26 2	3003	57 56 11	3012	59 26 9	3021
	Saturn W.	34 7 44	2962	35 38 44	2969	37 9 36	2975	38 40 20	2981
	Mars E.	50 20 11	3118	48 52 23	3129	47 24 49	3140	45 57 28	3151
	Venus E.	77 46 30	3253	76 21 23	3266	74 56 32	3277	73 31 54	3289
	Spica ♍ E.	80 19 12	2932	78 47 34	2943	77 16 10	2954	75 45 0	2965
	Sun E.	123 50 15	3307	122 26 12	3319	121 2 22	3331	119 38 46	3341
29	Aldebaran W.	66 53 29	3058	68 22 30	3065	69 51 22	3071	71 20 7	3078
	Saturn W.	46 11 56	3014	47 41 51	3021	49 11 38	3026	50 41 19	3032
	Pollux W.	22 37 38	3014	24 7 34	3021	25 37 21	3027	27 7 0	3033
	Mars E.	38 43 48	3199	37 17 37	3207	35 51 36	3215	34 25 44	3223
	Venus E.	66 32 0	3341	65 8 36	3351	63 45 23	3359	62 22 20	3368
	Spica ♍ E.	68 12 13	3010	66 42 13	3018	65 12 23	3026	63 42 43	3034
	Sun E.	112 43 46	3391	111 21 19	3400	109 59 2	3408	108 36 54	3416
30	Aldebaran W.	78 42 6	3102	80 10 13	3106	81 38 15	3110	83 6 13	3113
	Saturn W.	58 8 7	3054	59 37 13	3057	61 6 15	3060	62 35 13	3063
	Pollux W.	34 33 31	3059	36 2 31	3063	37 31 26	3066	39 0 17	3069
	Mars E.	27 18 30	3253	25 53 24	3258	24 28 24	3263	23 3 29	3267
	Venus E.	55 29 15	3401	54 7 0	3406	52 44 50	3412	51 22 47	3416
	Spica ♍ E.	56 16 24	3063	54 47 29	3068	53 18 40	3072	51 49 56	3075
	Sun E.	101 48 14	3446	100 26 50	3451	99 5 31	3455	97 44 17	3459

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
24	Fomalhaut W.	105 19 25	2747	106 55 2	2765	108 30 16	2782	110 5 7	2801
	α Pegasi W.	84 28 34	2906	86 0 45	2918	87 32 41	2931	89 4 20	2945
	α Arietis W.	41 23 57	2690	43 0 50	2695	44 37 36	2701	46 14 14	2709
	Pollux E.	34 20 36	2554	32 40 38	2568	31 0 59	2582	29 21 40	2597
	Regulus E.	70 57 18	2562	69 17 31	2577	67 38 4	2590	65 58 56	2604
	Mars E.	93 13 30	2726	91 37 25	2741	90 1 39	2755	88 26 12	2769
25	α Arietis W.	54 14 42	2755	55 50 9	2766	57 25 22	2776	59 0 21	2788
	Aldebaran W.	24 21 4	2935	25 52 39	2919	27 24 34	2907	28 56 44	2901
	Pollux E.	21 10 11	2675	19 32 57	2691	17 56 5	2708	16 19 36	2727
	Regulus E.	57 48 9	2678	56 11 0	2693	54 34 10	2708	52 57 41	2723
	Mars E.	80 33 41	2842	79 0 8	2857	77 26 54	2872	75 53 59	2887
	Venus E.	107 8 53	2956	105 37 45	2973	104 6 58	2988	102 36 30	3004
26	α Arietis W.	66 51 27	2847	68 24 54	2859	69 58 5	2872	71 31 0	2884
	Aldebaran W.	36 38 31	2904	38 10 45	2908	39 42 54	2914	41 14 55	2921
	Regulus E.	45 0 14	2798	43 25 44	2814	41 51 35	2829	40 17 45	2845
	Mars E.	68 14 7	2960	66 43 4	2974	65 12 19	2988	63 41 51	3002
	Venus E.	95 9 6	3082	93 40 35	3098	92 12 23	3114	90 44 30	3128
	Spica ♍ E.	98 59 12	2780	97 24 18	2794	95 49 42	2808	94 15 24	2821
27	α Arietis W.	79 11 44	2944	80 43 7	2955	82 14 16	2966	83 45 11	2978
	Aldebaran W.	48 52 40	2961	50 23 42	2969	51 54 33	2977	53 25 14	2987
	Saturn W.	28 2 34	2942	29 34 0	2946	31 5 21	2950	32 36 36	2956
	Regulus E.	32 33 35	2923	31 1 45	2939	29 30 16	2955	27 59 7	2973
	Mars E.	56 13 49	3069	54 45 2	3082	53 16 30	3094	51 48 13	3106
	Venus E.	83 29 29	3200	82 3 20	3214	80 37 28	3227	79 11 51	3241
	Spica ♍ E.	86 28 11	2885	84 55 33	2898	83 23 11	2909	81 51 4	2921
	Sun E.	129 28 54	3257	128 3 52	3270	126 39 5	3282	125 14 33	3294
28	α Arietis W.	91 16 20	3030	92 45 55	3039	94 15 19	3049	95 44 31	3058
	Aldebaran W.	60 55 56	3028	62 25 34	3036	63 55 2	3044	65 24 20	3051
	Saturn W.	40 10 56	2989	41 41 23	2995	43 11 42	3001	44 41 53	3008
	Mars E.	44 30 20	3161	43 3 24	3172	41 36 41	3181	40 10 9	3190
	Venus E.	72 7 30	3301	70 43 19	3312	69 19 21	3321	67 55 34	3332
	Spica ♍ E.	74 14 3	2974	72 43 18	2984	71 12 45	2993	69 42 23	3002
	Sun E.	118 15 22	3352	116 52 11	3363	115 29 12	3372	114 6 24	3381
29	Aldebaran W.	72 48 44	3083	74 17 14	3088	75 45 38	3094	77 13 55	3099
	Saturn W.	52 10 52	3037	53 40 19	3042	55 9 40	3046	56 38 56	3050
	Pollux W.	28 36 32	3039	30 5 56	3044	31 35 14	30[illegible]	[illegible] 4 25	3054
	Mars E.	33 0 2	3230	31 34 28	3236	30 9 1		42	3248
	Venus E.	60 59 27	3375	59 36 42	3382	58 14 [illegible]		5	3396
	Spica ♍ E.	62 13 12	3040	60 43 49	3046	59 14			
	Sun E.	107 14 55	3423	105 53 4	3430	104			
30	Aldebaran W.	84 34 7	3115	86 1 58	3117				
	Saturn W.	64 4 8	3065	65 33 1	3066				
	Pollux W.	40 29 4	3071	41 57 49	307[illegible]				
	Mars E.	21 38 39	3271	20 13 53	327[illegible]				
	Venus E.	50 0 48	3419	48 38 53	342[illegible]				
	Spica ♍ E.	50 21 16	3078	48 52 40	30[illegible]				
	Sun E.	96 23 7	3462	95 2 0	34[illegible]				

CONFIGURATIONS OF THE SATELLITES OF JUPITE

At 8h, Mean Time.

Day of the Month.	West.	East.
1	·2● 1· ·3 ○	·4
2	○ 1. 2··3	4·
3	2· ·1 ○ 3·	4·
4	·2 ○ 1· 3· 4·	
5	3· ·1 ○ 4· ·2	
6	1·○ 3· ○ 2·	
7	·3 4· ·2 ○ ·1	
8	4· ·3 1· ○	
9	4· ○ ·1·3 2·	
10	·4 ·1 2· ○ ·3	
11	·4 ·2 ○ 1· 3·	
12	·4 ·1 ○ ·2	
13	3· ·4 ○ 1· 2·	
14	·3 2· ·4 ○	
15	·3 1· ·2○ ·4	
16	○ ·1 ·3 2. ·4	
17	·1 2· ○ ·3 ·4	
18	·2 ○ 1. 3·	·4
19	·1 ○ 3· ·2	4·
20	3· ○ 1· 2· 4·	
21	3· 2· ·○1 4·	
22	·3 ·2 1·○ 4·	
23	3● 4· ○ ·1 2.	
24	2·○ 4· 1· ○ ·3	
25	4· ·2 ○ 1. 3·	
26	4· ·1 ○ 3· ·2	
27	·4 3· ○ 1· 2·	
28	·4 ·3 2· ·1 ○	
29	·4 ·3 ·2 ○	
30	·1● ·4 ○ ·2	

This Table represents, at 8h after *Mean Noon* of each day of the Month, the relative posi of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page Satellites by points. The numerals 1, 2, 3, and 4, annexed to the points, serve to distinguish Satellites from each other; and their positions are such as to indicate the directions of the S lites' motions, which are in all cases to be considered as *towards the numerals*. When a Satell at its greatest elongation, the point is placed above or below the centre of the numeral. A circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side o *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shado Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding $6^h \cdot 418488$. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	+1·1629	+1·1092	+9·7953	−0·8923	9 17 38·20	223	304	·832
2	1·1567	1·1184	9·7973	0·8915	9 13 42·29	224	305	·835
3	1·1502	1·1273	9·7993	0·8908	9 9 46·38	225	306	·838
4	+1·1434	+1·1359	+9·8012	−0·8900	9 5 50·47	226	307	·841
5	1·1364	1·1442	9·8032	0·8891	9 1 54·56	227	308	·843
6	1·1292	1·1522	9·8053	0·8883	8 57 58·65	228	309	·846
7	+1·1217	+1·1599	+9·8073	−0·8875	8 54 2·74	229	310	·849
8	1·1139	1·1674	9·8093	0·8867	8 50 6·83	230	311	·851
9	1·1059	1·1746	9·8114	0·8858	8 46 10·92	231	312	·854
10	+1·0975	+1·1816	+9·8134	−0·8850	8 42 15·01	232	313	·857
11	1·0889	1·1883	9·8155	0·8842	8 38 19·10	233	314	·860
12	1·0799	1·1948	9·8176	0·8834	8 34 23·19	234	315	·862
13	+1·0706	+1·2011	+9·8197	−0·8826	8 30 27·28	235	316	·865
14	1·0610	1·2072	9·8218	0·8818	8 26 31·37	236	317	·868
15	1·0510	1·2130	9·8239	0·8810	8 22 35·46	237	318	·871
16	+1·0406	+1·2187	+9·8260	−0·8802	8 18 39·55	238	319	·873
17	1·0298	1·2241	9·8281	0·8794	8 14 43·63	239	320	·876
18	1·0187	1·2293	9·8303	0·8786	8 10 47·72	240	321	·879
19	+1·0070	+1·2344	+9·8324	−0·8778	8 6 51·81	241	322	·882
20	0·9949	1·2392	9·8346	0·8771	8 2 55·90	242	323	·884
21	0·9824	1·2439	9·8367	0·8764	7 58 59·99	243	324	·887
22	+0·9693	+1·2484	+9·8389	−0·8757	7 55 4·08	244	325	·890
23	0·9556	1·2527	9·8411	0·8750	7 51 8·17	245	326	·893
24	0·9414	1·2568	9·8433	0·8743	7 47 12·25	246	327	·895
25	+0·9265	+1·2607	+9·8455	−0·8736	7 43 16·34	247	328	·898
26	0·9110	1·2645	9·8476	0·8730	7 39 20·43	248		1
27	0·8947	1·2682	9·8498	0·8724	7 35 24·52	249		
28	+0·8777	+1·2716	+9·8520	−0·8718	7 31 28·61	2		
29	0·8598	1·2749	9·8542	0·8712	7 27 32·69	2		
30	0·8410	1·2781	9·8564	0·8707	7 23 36·78	2		
31	+0·8212	+1·2811	+9·8586	−0·8702	7 19 40·87	2		

AT APPARENT NOON.

Day of the Week.	Day of the Month.	THE SUN'S *Apparent* Right Ascension.	Diff. for 1 hour.	THE SUN'S *Apparent* Declination.	Diff. for 1 hour.	Sidereal Time of the Semidiam. passing the Meridian.*	Equation of Time, *to be subt. from / added to Apparent Time.*	Diff. for 1 hour.
		h m s	s	° ′ ″	″	m s	m s	s
Sat.	1	16 28 11·37	10·808	S. 21 46 58·1	23·11	1 10·27	10 53·74	0·949
Sun.	2	16 32 30·76	10·835	21 56 12·7	22·06	1 10·35	10 30·97	0·975
Mon.	3	16 36 50·80	10·861	22 5 2·1	20·99	1 10·44	10 7·56	1·001
Tues.	4	16 41 11·46	10·886	22 13 25·9	19·92	1 10·52	9 43·53	1·027
Wed.	5	16 45 32·72	10·910	22 21 23·8	18·83	1 10·59	9 18·89	1·051
Thur.	6	16 49 54·55	10·932	22 28 55·7	17·74	1 10·67	8 53·68	1·073
Frid.	7	16 54 16·93	10·954	22 36 1·2	16·63	1 10·74	8 27·92	1·094
Sat.	8	16 58 39·83	10·973	22 42 40·2	15·51	1 10·80	8 1·67	1·114
Sun.	9	17 3 3·20	10·992	22 48 52·3	14·38	1 10·87	7 34·93	1·133
Mon.	10	17 7 27·02	11·009	22 54 37·4	13·25	1 10·92	7 7·75	1·150
Tues.	11	17 11 51·25	11·026	22 59 55·3	12·10	1 10·98	6 40·14	1·166
Wed.	12	17 16 15·87	11·039	23 4 45·7	10·96	1 11·03	6 12·16	1·180
Thur.	13	17 20 40·82	11·052	23 9 8·6	9·80	1 11·08	5 43·83	1·193
Frid.	14	17 25 6·08	11·064	23 13 3·8	8·64	1 11·12	5 15·21	1·204
Sat.	15	17 29 31·62	11·075	23 16 31·1	7·48	1 11·16	4 46·32	1·214
Sun.	16	17 33 57·41	11·083	23 19 30·5	6·31	1 11·19	4 17·17	1·223
Mon.	17	17 38 23·40	11·091	23 22 1·9	5·13	1 11·22	3 47·81	1·230
Tues.	18	17 42 49·58	11·096	23 24 5·1	3·96	1 11·24	3 18·28	1·236
Wed.	19	17 47 15·88	11·101	23 25 40·2	2·78	1 11·26	2 48·62	1·241
Thur.	20	17 51 42·30	11·104	23 26 47·0	1·60	1 11·28	2 18·84	1·244
Frid.	21	17 56 8·80	11·106	23 27 25·6	0·43	1 11·29	1 48·98	1·246
Sat.	22	18 0 35·35	11·106	23 27 35·9	0·75	1 11·29	1 19·07	1·247
Sun.	23	18 5 1·92	11·106	23 27 17·9	1·92	1 11·29	0 49·14	1·247
Mon.	24	18 9 28·48	11·105	23 26 31·6	3·10	1 11·29	0 19·22	1·245
Tues.	25	18 13 54·99	11·102	23 25 17·1	4·27	1 11·28	0 10·65	1·242
Wed.	26	18 18 21·43	11·098	23 23 34·3	5·45	1 11·27	0 40·45	1·238
Thur.	27	18 22 47·77	11·092	23 21 23·4	6·63	1 11·25	1 10·15	1·232
Frid.	28	18 27 13·98	11·085	23 18 44·3	7·80	1 11·23	1 39·71	1·225
Sat.	29	18 31 40·02	11·077	23 15 37·1	8·96	1 11·20	2 9·11	1·217
Sun.	30	18 36 5·86	11·067	23 12 2·0	10·13	1 11·17	2 38·32	1·207
Mon.	31	18 40 31·49	11·057	23 7 58·9	11·28	1 11·14	3 7·31	1·197
Tues.	32	18 44 56·85		S. 23 3 28·1		1 11·10	3 36·04	

* *Mean Time of the* Semidiameter passing may be found by subtracting 0ˢ·19 from the *Sidereal* Time.

AT MEAN NOON.

Day of the Week.	Day of the Month.	THE SUN'S Apparent Right Ascension.	THE SUN'S Apparent Declination.	THE SUN'S Semidiam.*	Equation of Time, *to be added to* / *subt. from* Mean Time.	Sidereal Time.
		h m s	° ′ ″	′ ″	m s	h m s
Sat.	1	16 28 13·33	S. 21 47 2·3	16 15·8	10 53·57	16 39 6·90
Sun.	2	16 32 32·66	21 56 16·6	16 16·0	10 30·80	16 43 3·46
Mon.	3	16 36 52·63	22 5 5·6	16 16·1	10 7·39	16 47 0·02
Tues.	4	16 41 13·22	22 13 29·1	16 16·3	9 43·36	16 50 56·58
Wed.	5	16 45 34·41	22 21 26·8	16 16·4	9 18·73	16 54 53·14
Thur.	6	16 49 56·17	22 28 58·4	16 16·5	8 53·52	16 58 49·69
Frid.	7	16 54 18·48	22 36 3·6	16 16·6	8 27·77	17 2 46·25
Sat.	8	16 58 41·29	22 42 42·2	16 16·7	8 1·52	17 6 42·81
Sun.	9	17 3 4·58	22 48 54·1	16 16·8	7 34·79	17 10 39·37
Mon.	10	17 7 28·32	22 54 39·0	16 17·0	7 7·61	17 14 35·93
Tues.	11	17 11 52·48	22 59 56·6	16 17·1	6 40·01	17 18 32·49
Wed.	12	17 16 17·01	23 4 46·9	16 17·2	6 12·04	17 22 29·05
Thur.	13	17 20 41·88	23 9 9·6	16 17·3	5 43·72	17 26 25·60
Frid.	14	17 25 7·05	23 13 4·5	16 17·4	5 15·11	17 30 22·16
Sat.	15	17 29 32·50	23 16 31·7	16 17·5	4 46·22	17 34 18·72
Sun.	16	17 33 58·20	23 19 31·0	16 17·6	4 17·08	17 38 15·28
Mon.	17	17 38 24·11	23 22 2·2	16 17·6	3 47·73	17 42 11·84
Tues.	18	17 42 50·19	23 24 5·3	16 17·7	3 18·21	17 46 8·40
Wed.	19	17 47 16·40	23 25 40·3	16 17·8	2 48·56	17 50 4·96
Thur.	20	17 51 42·73	23 26 47·1	16 17·9	2 18·79	17 54 1·52
Frid.	21	17 56 9·14	23 27 25·6	16 17·9	1 48·94	17 57 58·08
Sat.	22	18 0 35·59	23 27 35·9	16 18·0	1 19·04	18 1 54·63
Sun.	23	18 5 2·07	23 27 17·9	16 18·0	0 49·12	18 5 51·19
Mon.	24	18 9 28·54	23 26 31·6	16 18·1	0 19·21	18 9 47·75
Tues.	25	18 13 54·96	23 25 17·1	16 18·1	0 10·65	18 13 44·
Wed.	26	18 18 21·31	23 23 34·4	16 18·2	0 40·44	18 17 4·
Thur.	27	18 22 47·56	23 21 23·5	16 18·2	1 10·13	18
Frid.	28	18 27 13·67	23 18 44·5	16 18·2	1 39·68	
Sat.	29	18 31 39·62	23 15 37·5	16 18·2	2 9·07	
Sun.	30	18 36 5·37	23 12 2·5	16 18·2	2 38·27	
Mon.	31	18 40 30·91	23 7 59·5	16 18·2	3 7·25	
Tues.	32	18 44 56·19	S. 23 3 28·8	16 18·2	3 35·	

* The Semidiameter for *Apparent* Noon may be assumed the same as th

MEAN TIME.

Day of the Month.	THE SUN'S *Apparent*		Logarithm of the Radius Vector of the Earth.	THE MOON'S			
	Longitude.	Latitude.		Semidiameter.		Horizontal Parallax.	
	Noon.	*Noon.*	*Noon.*	*Noon.*	*Midnight.*	*Noon.*	*Midnight.*
	° ′ ″	″		′ ″	′ ″	′ ″	′ ″
1	248 46 37·0	N.0·63	9·9937290	14 48·9	14 48·8	54 15·6	54 15·4
2	249 47 29·4	0·54	9·9936658	14 49·5	14 50·9	54 18·0	54 23·1
3	250 48 23·2	0·42	9·9936044	14 53·1	14 55·8	54 30·9	54 41·1
4	251 49 18·3	0·30	9·9935448	14 59·2	15 3·2	54 53·6	55 8·0
5	252 50 14·7	0·16	9·9934868	15 7·6	15 12·5	55 24·3	55 42·1
6	253 51 12·3	N.0·02	9·9934304	15 17·7	15 23·1	56 1·1	56 21·0
7	254 52 11·1	S.0·11	9·9933753	15 28·7	15 34·3	56 41·4	57 1·9
8	255 53 10·9	0·23	9·9933216	15 39·8	15 45·1	57 22·1	57 41·6
9	256 54 11·6	0·33	9·9932694	15 50·2	15 54·8	58 0·1	58 17·1
10	257 55 13·1	0·41	9·9932187	15 59·0	16 2·7	58 32·5	58 46·0
11	258 56 15·4	0·45	9·9931696	16 5·9	16 8·4	58 57·5	59 6·9
12	259 57 18·4	0·46	9·9931221	16 10·4	16 11·7	59 14·1	59 19·1
13	260 58 21·8	0·45	9·9930761	16 12·6	16 12·9	59 22·1	59 23·4
14	261 59 25·8	0·40	9·9930319	16 12·8	16 12·3	59 23·1	59 21·3
15	263 0 30·2	0·34	9·9929896	16 11·5	16 10·3	59 18·1	59 13·8
16	264 1 35·0	0·24	9·9929493	16 8·8	16 7·1	59 8·4	59 2·2
17	265 2 40·1	S.0·13	9·9929112	16 5·2	16 3·0	58 55·1	58 47·1
18	266 3 45·5	0·00	9·9928754	16 0·6	15 57·9	58 38·2	58 28·5
19	267 4 51·1	N.0·13	9·9928421	15 55·0	15 51·9	58 17·8	58 6·3
20	268 5 57·1	0·25	9·9928114	15 48·5	15 44·9	57 53·9	57 40·7
21	269 7 3·3	0·37	9·9927833	15 41·1	15 37·0	57 26·7	57 12·0
22	270 8 9·8	0·47	9·9927580	15 32·9	15 28·6	56 56·7	56 41·0
23	271 9 16·6	0·56	9·9927353	15 24·2	15 19·8	56 25·0	56 8·8
24	272 10 23·8	0·61	9·9927155	15 15·4	15 11·2	55 52·9	55 37·3
25	273 11 31·3	0·64	9·9926987	15 7·1	15 3·2	55 22·4	55 8·3
26	274 12 39·2	0·64	9·9926847	14 59·7	14 56·5	54 55·2	54 43·5
27	275 13 47·5	0·60	9·9926734	14 53·8	14 51·5	54 33·4	54 25·1
28	276 14 56·1	0·54	9·9926648	14 49·7	14 48·6	54 18·7	54 14·4
29	277 16 5·2	0·44	9·9926587	14 48·0	14 48·2	54 12·5	54 13·0
30	278 17 14·6	0·33	9·9926551	14 49·0	14 50·5	54 16·1	54 21·7
31	279 18 24·5	0·21	9·9926539	14 52·8	14 55·8	54 30·0	54 41·1
32	280 19 34·8	N.0·10	9·9926550	14 59·6	15 4·0	54 54·8	55 10·8

MEAN TIME.

THE MOON'S

Day of the Week.	Day of the Month.	Longitude. Noon.	Longitude. Midnight.	Latitude. Noon.	Latitude. Midnight.	Age. Noon.	Meridian Passage.
		° ′ ″	° ′ ″	° ′ ″	° ′ ″	d	h m
Sat.	1	157 47 32·2	163 42 40·9	N.4 16 45·0	N.3 57 6·8	21·7	18 35·8
Sun.	2	169 37 55·8	175 33 55·2	3 34 55·8	3 10 23·8	22·7	19 15·3
Mon.	3	181 31 17·5	187 30 40·0	2 43 42·7	2 15 5·4	23·7	19 55·0
Tues.	4	193 32 38·8	199 37 47·6	1 44 46·5	1 13 1·6	24·7	20 35·9
Wed.	5	205 46 37·7	211 59 36·9	N.0 40 8·5	N.0 6 26·2	25·7	21 19·3
Thur.	6	218 17 8·5	224 39 31·2	S.0 27 42·9	S.1 1 55·2	26·7	22 6·4
Frid.	7	231 6 57·8	237 39 35·6	1 35 44·8	2 8 43·1	27·7	22 58·1
Sat.	8	244 17 24·3	251 0 17·5	2 40 20·8	3 10 7·1	28·7	23 54·6
Sun.	9	257 48 1·9	264 40 17·2	3 37 31·5	4 2 3·2	0·1	♂
Mon.	10	271 36 38·0	278 36 33·2	4 23 14·5	4 40 39·7	1·1	0 54·9
Tues.	11	285 39 28·1	292 44 45·8	4 53 55·8	5 2 46·1	2·1	1 56·8
Wed.	12	299 51 48·3	306 59 58·3	5 6 57·9	5 6 24·5	3·1	2 57·5
Thur.	13	314 8 40·3	321 17 22·1	5 1 4·9	4 51 4·0	4·1	3 55·1
Frid.	14	328 25 35·1	335 32 55·5	4 36 32·4	4 17 45·2	5·1	4 48·7
Sat.	15	342 39 4·1	349 43 45·9	3 55 2·1	3 28 46·9	6·1	5 39·0
Sun.	16	356 46 49·8	3 48 8·2	2 59 26·3	2 27 29·5	7·1	6 27·1
Mon.	17	10 47 35·8	17 45 9·3	1 53 28·6	1 17 55·8	8·1	7 14·2
Tues.	18	24 40 45·4	31 34 21·6	S.0 41 24·6	S.0 4 29·1	9·1	8 1·9
Wed.	19	38 25 54·4	45 15 18·7	N.0 32 17·5	N.1 8 22·2	10·1	8 51·3
Thur.	20	52 2 28·6	58 47 16·8	1 43 13·9	2 16 23·4	11·1	9 43·2
Frid.	21	65 29 33·4	72 9 7·6	2 47 23·9	3 15 51·2	12·1	10 37·7
Sat.	22	78 45 48·2	85 19 23·8	3 41 24·8	4 3 47·5	13·1	11 34·1
Sun.	23	91 49 43·9	98 16 38·8	4 22 46·0	4 38 10·5	14·1	12 30·7
Mon.	24	104 40 1·7	110 59 48·2	4 49 55·3	4 57 57·4	15·1	13 25·5
Tues.	25	117 15 57·5	123 28 33·0	5 2 17·6	5 2 59·1	16·1	14 17·2
Wed.	26	129 37 42·2	135 43 37·1	5 0 8·0	4 53 51·7	17·1	15 5·1
Thur.	27	141 46 33·8	147 46 53·0	4 44 18·9	4 31 40·4	18·1	15 49·4
Frid.	28	153 44 59·1	159 41 20·4	4 16 7·3	3 57 51·3	19·1	16 31·0
Sat.	29	165 36 28·1	171 30 56·7	3 37 4·3	3 13 59·0	20·1	17 10·7
Sun.	30	177 25 23·0	183 20 25·8	2 48 48·0	2 21 45·0	21·1	17 49·[illegible]
Mon.	31	189 16 45·3	195 15 3·2	1 53 3·4	1 22 57·9	22·1	18 2[illegible]
Tues.	32	201 16 0·9	207 20 19·3	N.0 51 44·1	N.0 19 38·4	23·1	19

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. for
	SATURDAY 1.				*MONDAY* 3.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	10 44 24·61	N. 12 37 15·7	125·85	0	12 9 55·68	N. 1 53 50·6	139
1	10 46 14·22	12 24 40·4	126·32	1	12 11 41·50	1 39 50·7	140
2	10 48 3·65	12 12 2·5	126·77	2	12 13 27·35	1 25 50·0	140
3	10 49 52·90	11 59 21·9	127·22	3	12 15 13·24	1 11 48·5	140
4	10 51 41·97	11 46 38·6	127·65	4	12 16 59·17	0 57 46·3	140
5	10 53 30·88	11 33 52·7	128·07	5	12 18 45·15	0 43 43·4	140
6	10 55 19·63	11 21 4·3	128·48	6	12 20 31·18	0 29 39·9	140
7	10 57 8·21	11 8 13·4	128·88	7	12 22 17·27	0 15 35·7	140
8	10 58 56·63	10 55 20·1	129·30	8	12 24 3·41	N. 0 1 31·0	140
9	11 0 44·90	10 42 24·3	129·68	9	12 25 49·62	S. 0 12 34·2	140
10	11 2 33·03	10 29 26·2	130·08	10	12 27 35·91	0 26 39·9	141
11	11 4 21·01	10 16 25·7	130·47	11	12 29 22·27	0 40 46·0	141
12	11 6 8·85	10 3 22·9	130·83	12	12 31 8·70	0 54 52·5	141
13	11 7 56·56	9 50 17·9	131·22	13	12 32 55·22	1 8 59·4	141
14	11 9 44·13	9 37 10·6	131·57	14	12 34 41·83	1 23 6·6	141
15	11 11 31·58	9 24 1·2	131·92	15	12 36 28·54	1 37 14·0	141
16	11 13 18·92	9 10 49·7	132·27	16	12 38 15·34	1 51 21·7	141
17	11 15 6·13	8 57 36·1	132·62	17	12 40 2·25	2 5 29·6	141
18	11 16 53·22	8 44 20·4	132·95	18	12 41 49·26	2 19 37·6	141
19	11 18 40·21	8 31 2·7	133·28	19	12 43 36·39	2 33 45·7	141
20	11 20 27·09	8 17 43·0	133·58	20	12 45 23·63	2 47 53·8	141
21	11 22 13·88	8 4 21·5	133·92	21	12 47 11·00	3 2 1·9	141
22	11 24 0·57	7 50 58·0	134·23	22	12 48 58·50	3 16 10·0	141
23	11 25 47·16	N. 7 37 32·6	134·52	23	12 50 46·12	S. 3 30 18·0	141
	SUNDAY 2.				*TUESDAY* 4.		
0	11 27 33·67	N. 7 24 5·5	134·82	0	12 52 33·88	S. 3 44 25·9	141
1	11 29 20·10	7 10 36·6	135·12	1	12 54 21·79	3 58 33·6	141
2	11 31 6·45	6 57 5·9	135·38	2	12 56 9·84	4 12 41·0	141
3	11 32 52·72	6 43 33·6	135·67	3	12 57 58·04	4 26 48·2	141
4	11 34 38·93	6 29 59·6	135·93	4	12 59 46·39	4 40 55·1	141
5	11 36 25·07	6 16 24·0	136·20	5	13 1 34·91	4 55 1·6	141
6	11 38 11·15	6 2 46·8	136·47	6	13 3 23·59	5 9 7·7	140
7	11 39 57·18	5 49 8·0	136·70	7	13 5 12·45	5 23 13·3	140
8	11 41 43·16	5 35 27·8	136·95	8	13 7 1·48	5 37 18·4	140
9	11 43 29·09	5 21 46·1	137·20	9	13 8 50·69	5 51 22·9	140
10	11 45 14·98	5 8 2·9	137·42	10	13 10 40·08	6 5 26·8	140
11	11 47 0·83	4 54 18·4	137·65	11	13 12 29·67	6 19 30·1	140
12	11 48 46·66	4 40 32·5	137·87	12	13 14 19·45	6 33 32·6	140
13	11 50 32·45	4 26 45·3	138·08	13	13 16 9·43	6 47 34·4	140
14	11 52 18·22	4 12 56·8	138·28	14	13 17 59·61	7 1 35·3	140
15	11 54 3·98	3 59 7·1	138·48	15	13 19 50·00	7 15 35·4	139
16	11 55 49·72	3 45 16·2	138·67	16	13 21 40·61	7 29 34·5	139
17	11 57 35·45	3 31 24·2	138·87	17	13 23 31·43	7 43 32·7	139
18	11 59 21·17	3 17 31·0	139·05	18	13 25 22·48	7 57 29·8	139
19	12 1 6·90	3 3 36·7	139·22	19	13 27 13·75	8 11 25·8	139
20	12 2 52·63	2 49 41·4	139·58	20	13 29 5·26	8 25 20·6	138
21	12 4 38·37	2 35 45·1	139·53	21	13 30 57·00	8 39 14·3	138
22	12 6 24·12	2 21 47·9	139·70	22	13 32 48·99	8 53 6·7	138
23	12 8 9·89	2 7 49·7	139·85	23	13 34 41·23	9 6 57·8	138
24	12 9 55·68	N. 1 53 50·6		24	13 36 33·71	S. 9 20 47·5	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	WEDNESDAY 5.		
	h m s	° ′ ″	″
0	13 36 33·71	S. 9 20 47·5	138·05
1	13 38 26·45	9 34 35·8	137·78
2	13 40 19·46	9 48 22·5	137·53
3	13 42 12·73	10 2 7·7	137·27
4	13 44 6·27	10 15 51·3	136·98
5	13 46 0·08	10 29 33·2	136·70
6	13 47 54·18	10 43 13·4	136·38
7	13 49 48·56	10 56 51·7	136·08
8	13 51 43·23	11 10 28·2	135·77
9	13 53 38·19	11 24 2·8	135·42
10	13 55 33·45	11 37 35·3	135·08
11	13 57 29·02	11 51 5·8	134·72
12	13 59 24·90	12 4 34·1	134·35
13	14 1 21·09	12 18 0·2	133·98
14	14 3 17·59	12 31 24·1	133·58
15	14 5 14·42	12 44 45·6	133·18
16	14 7 11·57	12 58 4·7	132·78
17	14 9 9·05	13 11 21·4	132·35
18	14 11 6·86	13 24 35·5	131·90
19	14 13 5·01	13 37 46·9	131·47
20	14 15 3·51	13 50 55·7	131·00
21	14 17 2·36	14 4 1·7	130·53
22	14 19 1·56	14 17 4·9	130·03
23	14 21 1·11	S. 14 30 5·1	129·55
	THURSDAY 6.		
0	14 23 1·01	S. 14 43 2·4	129·03
1	14 25 1·28	14 55 56·6	128·52
2	14 27 1·93	15 8 47·7	127·97
3	14 29 2·94	15 21 35·5	127·43
4	14 31 4·33	15 34 20·1	126·87
5	14 33 6·11	15 47 1·3	126·28
6	14 35 8·26	15 59 39·0	125·70
7	14 37 10·80	16 12 13·2	125·08
8	14 39 13·73	16 24 43·7	124·48
9	14 41 17·06	16 37 10·6	123·85
10	14 43 20·79	16 49 33·7	123·20
11	14 45 24·92	17 1 52·9	122·55
12	14 47 29·45	17 14 8·2	121·88
13	14 49 34·39	17 26 19·5	121·18
14	14 51 39·75	17 38 26·6	120·48
15	14 53 45·52	17 50 29·5	119·77
16	14 55 51·71	18 2 28·1	119·05
17	14 57 58·32	18 14 22·4	118·30
18	15 0 5·35	18 26 12·2	117·53
19	15 2 12·82	18 37 57·4	116·75
20	15 4 20·71	18 49 37·9	115·98
21	15 6 29·04	19 1 13·8	115·18
22	15 8 37·80	19 12 44·7	114·35
23	15 10 46·99	19 24 10·8	113·52
24	15 12 56·63	S. 19 35 31·9	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 7.		
	h m s	° ′ ″	″
0	15 12 56·63	S. 19 35 31·9	112·65
1	15 15 6·71	19 46 47·8	111·80
2	15 17 17·24	19 57 58·6	110·92
3	15 19 28·22	20 9 4·1	110·00
4	15 21 39·64	20 20 4·1	109·10
5	15 23 51·51	20 30 58·7	108·17
6	15 26 3·84	20 41 47·7	107·22
7	15 28 16·62	20 52 31·0	106·25
8	15 30 29·86	21 3 8·5	105·28
9	15 32 43·55	21 13 40·2	104·28
10	15 34 57·70	21 24 5·9	103·28
11	15 37 12·31	21 34 25·6	102·25
12	15 39 27·37	21 44 39·1	101·20
13	15 41 42·90	21 54 46·3	100·15
14	15 43 58·88	22 4 47·2	99·08
15	15 46 15·33	22 14 41·7	97·98
16	15 48 32·23	22 24 29·6	96·87
17	15 50 49·60	22 34 10·8	95·75
18	15 53 7·43	22 43 45·3	94·60
19	15 55 25·72	22 53 12·9	93·45
20	15 57 44·47	23 2 33·6	92·27
21	16 0 3·68	23 11 47·2	91·08
22	16 2 23·35	23 20 53·7	89·87
23	16 4 43·47	S. 23 29 52·9	88·65
	SATURDAY 8.		
0	16 7 4·05	S. 23 38 44·8	87·40
1	16 9 25·09	23 47 29·2	86·15
2	16 11 46·58	23 56 6·1	84·88
3	16 14 8·52	24 4 35·4	83·58
4	16 16 30·92	24 12 56·9	82·28
5	16 18 53·76	24 21 10·6	80·95
6	16 21 17·05	24 29 16·3	79·62
7	16 23 40·78	24 37 14·0	78·27
8	16 26 4·95	24 45 3·6	76·90
9	16 28 29·56	24 52 45·0	75·50
10	16 30 54·60	25 0 18·0	74·10
11	16 33 20·07	25 7 42·6	72·68
12	16 35 45·97	25 14 58·7	71·25
13	16 38 12·29	25 22 6·2	69·82
14	16 40 39·04	25 2	
15	16 43 6·20	25	
16	16 45 32·		
17	16 48		
18	16 5		
19	16 5		
20	16		
21	16		
22	17		
23	17		
24	17		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 9.		
	h m s	° ′ ″	″
0	17 5 28·51	S. 26 30 34·8	52·87
1	17 7 59·55	26 35 52·0	51·23
2	17 10 30·94	26 40 59·4	49·60
3	17 13 2·67	26 45 57·0	47·95
4	17 15 34·75	26 50 44·7	46·28
5	17 18 7·17	26 55 22·4	44·62
6	17 20 39·91	26 59 50·1	42·92
7	17 23 12·97	27 4 7·6	41·22
8	17 25 46·34	27 8 14·9	39·52
9	17 28 20·02	27 12 12·0	37·78
10	17 30 53·99	27 15 58·7	36·05
11	17 33 28·25	27 19 35·0	34·32
12	17 36 2·79	27 23 0·9	32·55
13	17 38 37·61	27 26 16·2	30·80
14	17 41 12·68	27 29 21·0	29·02
15	17 43 48·01	27 32 15·1	27·23
16	17 46 23·58	27 34 58·5	25·45
17	17 48 59·39	27 37 31·2	23·63
18	17 51 35·43	27 39 53·0	21·83
19	17 54 11·68	27 42 4·0	20·02
20	17 56 48·14	27 44 4·1	18·18
21	17 59 24·80	27 45 53·2	16·35
22	18 2 1·64	27 47 31·3	14·52
23	18 4 38·66	S. 27 48 58·4	12·68
	MONDAY 10.		
0	18 7 15·85	S. 27 50 14·5	10·82
1	18 9 53·20	27 51 19·4	8·97
2	18 12 30·69	27 52 13·2	7·08
3	18 15 8·32	27 52 55·7	5·23
4	18 17 46·08	27 53 27·1	3·37
5	18 20 23·95	27 53 47·3	1·47
6	18 23 1·93	27 53 56·1	0·40
7	18 25 40·01	27 53 53·7	2·28
8	18 28 18·17	27 53 40·0	4·17
9	18 30 56·40	27 53 15·0	6·05
10	18 33 34·70	27 52 38·7	7·95
11	18 36 13·05	27 51 51·0	9·85
12	18 38 51·45	27 50 51·9	11·75
13	18 41 29·88	27 49 41·4	13·63
14	18 44 8·33	27 48 19·6	15·52
15	18 46 46·78	27 46 46·5	17·43
16	18 49 25·23	27 45 1·9	19·32
17	18 52 3·68	27 43 6·0	21·22
18	18 54 42·11	27 40 58·7	23·10
19	18 57 20·50	27 38 40·1	24·98
20	18 59 58·84	27 36 10·2	26·87
21	19 2 37·14	27 33 29·0	28·77
22	19 5 15·38	27 30 36·4	30·63
23	19 7 53·54	27 27 32·6	32·52
24	19 10 31·62	S. 27 24 17·5	

Hour.	Right Ascension.	Declination.	D f
	TUESDAY 11.		
	h m s	° ′ ″	
0	19 10 31·62	S. 27 24 17·5	
1	19 13 9·61	27 20 51·2	
2	19 15 47·49	27 17 13·6	
3	19 18 25·26	27 13 24·9	
4	19 21 2·91	27 9 25·1	
5	19 23 40·42	27 5 14·1	
6	19 26 17·79	27 0 52·1	
7	19 28 55·02	26 56 19·0	
8	19 31 32·08	26 51 34·9	
9	19 34 8·98	26 46 39·9	
10	19 36 45·70	26 41 34·0	
11	19 39 22·23	26 36 17·2	
12	19 41 58·57	26 30 49·6	
13	19 44 34·70	26 25 11·2	
14	19 47 10·63	26 19 22·2	
15	19 49 46·33	26 13 22·5	
16	19 52 21·81	26 7 12·2	
17	19 54 57·05	26 0 51·3	
18	19 57 32·05	25 54 20·0	
19	20 0 6·81	25 47 38·3	
20	20 2 41·31	25 40 46·3	
21	20 5 15·54	25 33 44·0	
22	20 7 49·50	25 26 31·5	
23	20 10 23·19	S. 25 19 8·9	
	WEDNESDAY 12.		
0	20 12 56·60	S. 25 11 36·2	
1	20 15 29·72	25 3 53·5	
2	20 18 2·54	24 56 1·0	
3	20 20 35·07	24 47 58·6	
4	20 23 7·29	24 39 46·4	
5	20 25 39·20	24 31 24·6	
6	20 28 10·80	24 22 53·2	
7	20 30 42·08	24 14 12·3	
8	20 33 13·04	24 5 22·0	
9	20 35 43·66	23 56 22·3	
10	20 38 13·96	23 47 13·4	
11	20 40 43·92	23 37 55·3	
12	20 43 13·54	23 28 28·1	
13	20 45 42·82	23 18 51·9	
14	20 48 11·75	23 9 6·9	
15	20 50 40·33	22 59 13·1	1
16	20 53 8·56	22 49 10·5	1
17	20 55 36·43	22 38 59·3	1
18	20 58 3·95	22 28 39·7	1
19	21 0 31·12	22 18 11·6	1
20	21 2 57·92	22 7 35·2	1
21	21 5 24·35	21 56 50·5	1
22	21 7 50·43	21 45 57·7	1
23	21 10 16·14	21 34 56·8	1
24	21 12 41·48	S. 21 23 48·0	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	THURSDAY 13.				*SATURDAY* 15.		
	h m s	° ′ ″	″		h m s	° ′ ″	″
0	21 12 41·48	S. 21 23 48·0	112·77	0	23 2 7·75	S. 10 26 2·6	155·80
1	21 15 6·46	21 12 31·4	114·07	1	23 4 17·11	10 10 27·8	156·30
2	21 17 31·07	21 1 7·0	115·33	2	23 6 26·23	9 54 50·0	156·77
3	21 19 55·31	20 49 35·0	116·58	3	23 8 35·11	9 39 9·4	157·25
4	21 22 19·18	20 37 55·5	117·83	4	23 10 43·77	9 23 25·9	157·70
5	21 24 42·68	20 26 8·5	119·07	5	23 12 52·21	9 7 39·7	158·12
6	21 27 5·82	20 14 14·1	120·27	6	23 15 0·43	8 51 51·0	158·55
7	21 29 28·59	20 2 12·5	121·45	7	23 17 8·44	8 35 59·7	158·95
8	21 31 50·99	19 50 3·8	122·62	8	23 19 16·24	8 20 6·0	159·35
9	21 34 13·02	19 37 48·1	123·78	9	23 21 23·83	8 4 9·9	159·72
10	21 36 34·69	19 25 25·4	124·92	10	23 23 31·23	7 48 11·6	160·08
11	21 38 55·99	19 12 55·9	126·05	11	23 25 38·43	7 32 11·1	160·42
12	21 41 16·93	19 0 19·6	127·15	12	23 27 45·45	7 16 8·6	160·75
13	21 43 37·50	18 47 36·7	128·23	13	23 29 52·29	7 0 4·1	161·07
14	21 45 57·71	18 34 47·3	129·30	14	23 31 58·95	6 43 57·7	161·37
15	21 48 17·56	18 21 51·5	130·37	15	23 34 5·44	6 27 49·5	161·65
16	21 50 37·06	18 8 49·3	131·40	16	23 36 11·77	6 11 39·6	161·92
17	21 52 56·19	17 55 40·9	132·42	17	23 38 17·93	5 55 28·1	162·18
18	21 55 14·97	17 42 26·4	133·42	18	23 40 23·94	5 39 15·0	162·42
19	21 57 33·40	17 29 5·9	134·42	19	23 42 29·80	5 23 0·5	162·65
20	21 59 51·47	17 15 39·4	135·38	20	23 44 35·51	5 6 44·6	162·85
21	22 2 9·20	17 2 7·1	136·33	21	23 46 41·09	4 50 27·5	163·07
22	22 4 26·58	16 48 29·1	137·27	22	23 48 46·53	4 34 9·1	163·23
23	22 6 43·62	S. 16 34 45·5	138·18	23	23 50 51·84	S. 4 17 49·7	163·42
	FRIDAY 14.				*SUNDAY* 16.		
0	22 9 0·32	S. 16 20 56·4	139·08	0	23 52 57·03	S. 4 1 29·2	163·57
1	22 11 16·68	16 7 1·9	139·98	1	23 55 2·10	3 45 7·8	163·72
2	22 13 32·70	15 53 2·0	140·83	2	23 57 7·06	3 28 45·5	163·83
3	22 15 48·40	15 38 57·0	141·68	3	23 59 11·92	3 12 22·5	163·95
4	22 18 3·76	15 24 46·9	142·53	4	0 1 16·67	2 55 58·8	164·05
5	22 20 18·80	15 10 31·7	143·35	5	0 3 21·33	2 39 34·5	164·13
6	22 22 33·51	14 56 11·6	144·15	6	0 5 25·90	2 23 9·7	164·20
7	22 24 47·91	14 41 46·7	144·93	7	0 7 30·38	2 6 44·5	164·25
8	22 27 2·00	14 27 17·1	145·70	8	0 9 34·78	1 50 19·0	164·30
9	22 29 15·77	14 12 42·9	146·45	9	0 11 39·11	1 33 53·2	164·33
10	22 31 29·23	13 58 4·2	147·18	10	0 13 43·37	1 17 27·2	164·33
11	22 33 42·39	13 43 21·1	147·92	11	0 15 47·57	1 1 1·2	164·35
12	22 35 55·25	13 28 33·6	148·62	12	0 17 51·71	0 44 35·1	164·33
13	22 38 7·82	13 13 41·9	149·30	13	0 19 55·80	0 28 9·1	164·30
14	22 40 20·09	12 58 46·1	149·97	14	0 21 59·84	S. 0 11 43·3	164·25
15	22 42 32·08	12 43 46·3	150·63	15	0 24 3·83	N. 0 4 2·2	164·20
16	22 44 43·79	12 28 42·5	151·27	16	0 26 7·79	0 20 4	164·15
17	22 46 55·21	12 13 34·9	151·88	17	0 28 11·73	0 36 3	164
18	22 49 6·36	11 58 23·6	152·48	18	0 30 15·64	0 52	163
19	22 51 17·24	11 43 8·7	153·08	19	0 32 19·52	1 8	163
20	22 53 27·86	11 27 50·2	153·67	20	[illegible]	[illegible]	16
21	22 55 38·21	11 12 28·2	154·22	21			
22	22 57 48·31	10 57 2·9	154·77	22			
23	22 59 58·15	10 41 34·3	155·28	23			
24	23 2 7·75	S. 10 26 2·6		24			

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.	Hour.	Right Ascension.	Declination.	Di fo
	MONDAY 17.				*WEDNESDAY* 19.		
	h m s	° ′ ″	″		h m s	° ′ ″	
0	0 42 38·85	N. 2 32 7·6	163·10	0	2 23 29·21	N.14 50 12·1	13
1	0 44 42·73	2 48 26·2	162·92	1	2 25 39·23	15 4 4·6	13
2	0 46 46·63	3 4 43·7	162·70	2	2 27 49·48	15 17 52·0	13
3	0 48 50·55	3 20 59·9	162·48	3	2 29 59·96	15 31 34·3	13
4	0 50 54·50	3 37 14·8	162·27	4	2 32 10·66	15 45 11·4	13
5	0 52 58·48	3 53 28·4	162·02	5	2 34 21·59	15 58 43·3	13
6	0 55 2·50	4 9 40·5	161·75	6	2 36 32·76	16 12 9·8	13
7	0 57 6·57	4 25 51·0	161·48	7	2 38 44·16	16 25 30·8	13
8	0 59 10·68	4 41 59·9	161·20	8	2 40 55·80	16 38 46·3	13
9	1 1 14·84	4 58 7·1	160·90	9	2 43 7·67	16 51 56·3	13
10	1 3 19·06	5 14 12·5	160·58	10	2 45 19·79	17 5 0·6	12
11	1 5 23·35	5 30 16·0	160·27	11	2 47 32·16	17 17 59·1	12
12	1 7 27·71	5 46 17·6	159·93	12	2 49 44·77	17 30 51·8	12
13	1 9 32·14	6 2 17·2	159·57	13	2 51 57·63	17 43 38·6	12
14	1 11 36·65	6 18 14·6	159·20	14	2 54 10·74	17 56 19·4	12
15	1 13 41·24	6 34 9·8	158·83	15	2 56 24·10	18 8 54·1	12
16	1 15 45·92	6 50 2·8	158·43	16	2 58 37·71	18 21 22·7	12
17	1 17 50·69	7 5 53·4	158·03	17	3 0 51·58	18 33 45·0	12
18	1 19 55·56	7 21 41·6	157·60	18	3 3 5·70	18 46 1·0	12
19	1 22 0·54	7 37 27·2	157·18	19	3 5 20·08	18 58 10·7	12
20	1 24 5·62	7 53 10·3	156·73	20	3 7 34·72	19 10 13·9	11
21	1 26 10·81	8 8 50·7	156·27	21	3 9 49·61	19 22 10·5	11
22	1 28 16·12	8 24 28·3	155·80	22	3 12 4·76	19 34 0·6	11
23	1 30 21·55	N. 8 40 3·1	155·30	23	3 14 20·17	N.19 45 43·9	11
	TUESDAY 18.				*THURSDAY* 20.		
0	1 32 27·11	N. 8 55 34·9	154·80	0	3 16 35·83	N.19 57 20·5	11
1	1 34 32·80	9 11 3·7	154·30	1	3 18 51·76	20 8 50·3	11
2	1 36 38·63	9 26 29·5	153·77	2	3 21 7·94	20 20 13·1	11
3	1 38 44·59	9 41 52·1	153·22	3	3 23 24·39	20 31 28·9	11
4	1 40 50·70	9 57 11·4	152·67	4	3 25 41·10	20 42 37·7	11
5	1 42 56·95	10 12 27·4	152·12	5	3 27 58·06	20 53 39·3	10
6	1 45 3·36	10 27 40·1	151·52	6	3 30 15·28	21 4 33·7	10
7	1 47 9·92	10 42 49·2	150·92	7	3 32 32·76	21 15 20·8	10
8	1 49 16·65	10 57 54·7	150·32	8	3 34 50·50	21 26 0·6	10
9	1 51 23·54	11 12 56·6	149·70	9	3 37 8·49	21 36 32·9	10
10	1 53 30·60	11 27 54·8	149·05	10	3 39 26·74	21 46 57·7	10
11	1 55 37·83	11 42 49·1	148·42	11	3 41 45·24	21 57 15·0	10
12	1 57 45·23	11 57 39·6	147·75	12	3 44 4·00	22 7 24·6	10
13	1 59 52·82	12 12 26·1	147·08	13	3 46 23·01	22 17 26·5	9
14	2 2 0·59	12 27 8·6	146·38	14	3 48 42·26	22 27 20·6	9
15	2 4 8·55	12 41 46·9	145·68	15	3 51 1·76	22 37 6·9	9
16	2 6 16·70	12 56 21·0	144·97	16	3 53 21·51	22 46 45·2	9
17	2 8 25·05	13 10 50·8	144·23	17	3 55 41·51	22 56 15·6	9
18	2 10 33·59	13 25 16·2	143·48	18	3 58 1·74	23 5 37·9	9
19	2 12 42·34	13 39 37·1	142·73	19	4 0 22·21	23 14 52·1	9
20	2 14 51·29	13 53 53·5	141·97	20	4 2 42·92	23 23 58·1	8
21	2 17 0·45	14 8 5·3	141·18	21	4 5 3·86	23 32 55·8	8
22	2 19 9·82	14 22 12·4	140·38	22	4 7 25·03	23 41 45·3	8
23	2 21 19·41	14 36 14·7	139·57	23	4 9 46·43	23 50 26·4	8
24	2 23 29·21	N.14 50 12·1		24	4 12 8·05	N.23 58 59·1	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	FRIDAY 21.		
	h m s	° ′ ″	″
0	4 12 8·05	N.23 58 59·1	84·03
1	4 14 29·90	24 7 23·3	82·60
2	4 16 51·96	24 15 38·9	81·18
3	4 19 14·24	24 23 46·0	79·73
4	4 21 36·73	24 31 44·4	78·27
5	4 23 59·43	24 39 34·0	76·82
6	4 26 22·33	24 47 14·9	75·35
7	4 28 45·42	24 54 47·0	73·88
8	4 31 8·71	25 2 10·3	72·38
9	4 33 32·19	25 9 24·6	70·88
10	4 35 55·86	25 16 29·9	69·40
11	4 38 19·71	25 23 26·3	67·88
12	4 40 43·73	25 30 13·6	66·37
13	4 43 7·93	25 36 51·8	64·85
14	4 45 32·29	25 43 20·9	63·30
15	4 47 56·81	25 49 40·7	61·77
16	4 50 21·48	25 55 51·3	60·23
17	4 52 46·30	26 1 52·7	58·68
18	4 55 11·27	26 7 44·8	57·12
19	4 57 36·37	26 13 27·5	55·57
20	5 0 1·61	26 19 0·9	54·02
21	5 2 26·98	26 24 24·8	52·42
22	5 4 52·46	26 29 39·3	50·85
23	5 7 18·05	N.26 34 44·4	49·25
	SATURDAY 22.		
0	5 9 43·76	N.26 39 39·9	47·67
1	5 12 9·57	26 44 25·9	46·07
2	5 14 35·47	26 49 2·3	44·48
3	5 17 1·46	26 53 29·2	42·87
4	5 19 27·53	26 57 46·4	41·28
5	5 21 53·66	27 1 54·1	39·67
6	5 24 19·87	27 5 52·1	38·05
7	5 26 46·14	27 9 40·4	36·45
8	5 29 12·46	27 13 19·1	34·82
9	5 31 38·83	27 16 48·0	33·22
10	5 34 5·24	27 20 7·3	31·60
11	5 36 31·67	27 23 16·9	29·97
12	5 38 58·13	27 26 16·7	28·35
13	5 41 24·61	27 29 6·8	26·73
14	5 43 51·09	27 31 47·2	25·10
15	5 46 17·58	27 34 17·8	23·48
16	5 48 44·06	27 36 38·7	21·85
17	5 51 10·53	27 38 49·8	20·23
18	5 53 36·99	27 40 51·2	18·62
19	5 56 3·42	27 42 42·9	17·00
20	5 58 29·81	27 44 24·9	15·37
21	6 0 56·16	27 45 57·1	13·73
22	6 3 22·47	27 47 19·5	12·1
23	6 5 48·72	27 48 32·3	10·5
24	6 8 14·89	N.27 49 35·4	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SUNDAY 23.		
	h m s	° ′ ″	″
0	6 8 14·89	N.27 49 35·4	8·90
1	6 10 40·99	27 50 28·8	7·28
2	6 13 7·01	27 51 12·5	5·67
3	6 15 32·94	27 51 46·5	4·07
4	6 17 58·78	27 52 10·9	2·47
5	6 20 24·52	27 52 25·7	0·85
6	6 22 50·14	27 52 30·8	0·73
7	6 25 15·64	27 52 26·4	2·32
8	6 27 41·02	27 52 12·5	3·92
9	6 30 6·27	27 51 49·0	5·50
10	6 32 31·38	27 51 16·0	7·07
11	6 34 56·34	27 50 33·6	8·65
12	6 37 21·15	27 49 41·7	10·22
13	6 39 45·80	27 48 40·4	11·78
14	6 42 10·28	27 47 29·7	13·33
15	6 44 34·59	27 46 9·7	14·88
16	6 46 58·72	27 44 40·4	16·43
17	6 49 22·66	27 43 1·8	17·97
18	6 51 46·41	27 41 14·0	19·50
19	6 54 9·95	27 39 17·0	21·03
20	6 56 33·29	27 37 10·8	22·55
21	6 58 56·41	27 34 55·5	24·05
22	7 1 19·31	27 32 31·2	25·57
23	7 3 41·99	N.27 29 57·8	27·07
	MONDAY 24.		
0	7 6 4·43	N.27 27 15·5	28·55
1	7 8 26·64	27 24 24·2	30·02
2	7 10 48·60	27 21 24·1	31·50
3	7 13 10·31	27 18 15·1	32·97
4	7 15 31·77	27 14 57·3	34·40
5	7 17 52·97	27 11 30·9	35·87
6	7 20 13·91	27 7 55·7	37·30
7	7 22 34·57	27 4 11·9	38·72
8	7 24 54·96	27 0 19·6	40·15
9	7 27 15·06	26 56 18·7	41·57
10	7 29 34·88	26 52 9·3	42·95
11	7 31 54·41	26 47 51·6	44·32
12	7 34 13·65	26 43 25·7	45·72
13	7 36 32·59	26 38 51·4	47·08
14	7 38 51·23	26 34 8·9	48·45
15	7 41 9·56	26 29 18·2	49·80
16	7 43 27·58	26 24 19·4	51·13
17	7 45 45·28	12·6	52·47
18	7 48 2·67	7·8	53·78
19	7 50 19·7	1	15·08
20	7 52 36·4		·38
21	7 54 52·8		
	7 57 8·1		
	59 24·1		
	1 40·1		

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	TUESDAY 25.		
	h m s	° ′ ″	″
0	8 1 40·13	N.25 39 45·3	61·47
1	8 3 55·20	25 33 36·5	62·70
2	8 6 9·93	25 27 20·3	63·93
3	8 8 24·32	25 20 56·7	65·17
4	8 10 38·36	25 14 25·7	66·35
5	8 12 52·05	25 7 47·6	67·57
6	8 15 5·39	25 1 2·2	68·75
7	8 17 18·37	24 54 9·7	69·92
8	8 19 31·01	24 47 10·2	71·07
9	8 21 43·29	24 40 3·7	72·23
10	8 23 55·22	24 32 50·3	73·37
11	8 26 6·79	24 25 30·1	74·50
12	8 28 17·99	24 18 3·1	75·62
13	8 30 28·84	24 10 29·4	76·72
14	8 32 39·32	24 2 49·1	77·82
15	8 34 49·45	23 55 2·2	78·90
16	8 36 59·22	23 47 8·8	79·97
17	8 39 8·62	23 39 9·0	81·02
18	8 41 17·66	23 31 2·9	82·07
19	8 43 26·34	23 22 50·5	83·12
20	8 45 34·66	23 14 31·8	84·13
21	8 47 42·61	23 6 7·0	85·13
22	8 49 50·21	22 57 36·2	86·15
23	8 51 57·44	N.22 48 59·3	87·13
	WEDNESDAY 26.		
0	8 54 4·31	N.22 40 16·5	88·12
1	8 56 10·82	22 31 27·8	89·07
2	8 58 16·97	22 22 33·4	90·03
3	9 0 22·76	22 13 33·2	90·98
4	9 2 28·19	22 4 27·3	91·92
5	9 4 33·26	21 55 15·8	92·83
6	9 6 37·98	21 45 58·8	93·73
7	9 8 42·34	21 36 36·4	94·65
8	9 10 46·35	21 27 8·5	95·53
9	9 12 50·00	21 17 35·3	96·40
10	9 14 53·30	21 7 56·9	97·28
11	9 16 56·25	20 58 13·2	98·13
12	9 18 58·86	20 48 24·4	98·98
13	9 21 1·12	20 38 30·5	99·80
14	9 23 3·03	20 28 31·7	100·63
15	9 25 4·60	20 18 27·9	101·45
16	9 27 5·83	20 8 19·2	102·25
17	9 29 6·72	19 58 5·7	103·03
18	9 31 7·27	19 47 47·5	103·82
19	9 33 7·49	19 37 24·6	104·60
20	9 35 7·38	19 26 57·0	105·35
21	9 37 6·93	19 16 24·9	106·08
22	9 39 6·16	19 5 48·4	106·83
23	9 41 5·07	18 55 7·4	107·57
24	9 43 3·65	N.18 44 22·0	

Hour.	Right Ascension.	Declination.	Diff. for
	THURSDAY 27.		
	h m s	° ′ ″	″
0	9 43 3·65	N.18 44 22·0	108
1	9 45 1·92	18 33 32·3	108
2	9 46 59·87	18 22 38·4	109
3	9 48 57·50	18 11 40·3	110
4	9 50 54·83	18 0 38·1	111
5	9 52 51·85	17 49 31·8	111
6	9 54 48·56	17 38 21·5	112
7	9 56 44·97	17 27 7·3	113
8	9 58 41·08	17 15 49·1	113
9	10 0 36·90	17 4 27·1	114
10	10 2 32·42	16 53 1·4	114
11	10 4 27·66	16 41 31·9	115
12	10 6 22·61	16 29 58·8	116
13	10 8 17·27	16 18 22·1	116
14	10 10 11·66	16 6 41·8	117
15	10 12 5·77	15 54 58·0	117
16	10 13 59·61	15 43 10·7	118
17	10 15 53·18	15 31 20·1	118
18	10 17 46·48	15 19 26·2	119
19	10 19 39·53	15 7 28·9	120
20	10 21 32·31	14 55 28·4	120
21	10 23 24·84	14 43 24·8	121
22	10 25 17·13	14 31 18·0	121
23	10 27 9·16	N.14 19 8·1	122
	FRIDAY 28.		
0	10 29 0·95	N.14 6 55·2	122
1	10 30 52·50	13 54 39·3	123
2	10 32 43·82	13 42 20·5	123
3	10 34 34·91	13 29 58·9	124
4	10 36 25·77	13 17 34·4	124
5	10 38 16·40	13 5 7·1	125
6	10 40 6·82	12 52 37·1	125
7	10 41 57·02	12 40 4·4	125
8	10 43 47·01	12 27 29·1	126
9	10 45 36·79	12 14 51·2	126
10	10 47 26·37	12 2 10·7	127
11	10 49 15·75	11 49 27·8	127
12	10 51 4·93	11 36 42·4	127
13	10 52 53·92	11 23 54·6	128
14	10 54 42·73	11 11 4·5	128
15	10 56 31·35	10 58 12·0	129
16	10 58 19·79	10 45 17·3	129
17	11 0 8·06	10 32 20·4	129
18	11 1 56·16	10 19 21·3	130
19	11 3 44·09	10 6 20·0	130
20	11 5 31·86	9 53 16·7	130
21	11 7 19·47	9 40 11·3	131
22	11 9 6·93	9 27 3·9	131
23	11 10 54·24	9 13 54·6	131
24	11 12 41·40	N. 9 0 43·3	

MEAN TIME.

THE MOON'S RIGHT ASCENSION AND DECLINATION.

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	SATURDAY 29.		
	h m s	° ′ ″	″
0	11 12 41·40	N. 9 0 43·3	132·18
1	11 14 28·43	8 47 30·2	132·50
2	11 16 15·32	8 34 15·2	132·78
3	11 18 2·08	8 20 58·5	133·08
4	11 19 48·71	8 7 40·0	133·37
5	11 21 35·22	7 54 19·8	133·65
6	11 23 21·61	7 40 57·9	133·92
7	11 25 7·89	7 27 34·4	134·18
8	11 26 54·06	7 14 9·3	134·45
9	11 28 40·13	7 0 42·6	134·70
10	11 30 26·10	6 47 14·4	134·93
11	11 32 11·97	6 33 44·8	135·18
12	11 33 57·74	6 20 13·7	135·42
13	11 35 43·43	6 6 41·2	135·63
14	11 37 29·04	5 53 7·4	135·87
15	11 39 14·57	5 39 32·2	136·07
16	11 41 0·03	5 25 55·8	136·27
17	11 42 45·42	5 12 18·2	136·48
18	11 44 30·75	4 58 39·3	136·67
19	11 46 16·02	4 44 59·3	136·87
20	11 48 1·23	4 31 18·1	137·03
21	11 49 46·39	4 17 35·9	137·20
22	11 51 31·50	4 3 52·7	137·38
23	11 53 16·57	N. 3 50 8·4	137·53
	SUNDAY 30.		
0	11 55 1·61	N. 3 36 23·2	137·68
1	11 56 46·62	3 22 37·1	137·85
2	11 58 31·60	3 8 50·0	137·98
3	12 0 16·56	2 55 2·1	138·12
4	12 2 1·50	2 41 13·4	138·25
5	12 3 46·43	2 27 23·9	138·37
6	12 5 31·35	2 13 33·7	138·48
7	12 7 16·27	1 59 42·8	138·60
8	12 9 1·18	1 45 51·2	138·70
9	12 10 46·10	1 31 59·0	138·80
10	12 12 31·04	1 18 6·2	138·88
11	12 14 15·99	1 4 12·9	138·98
12	12 16 0·95	0 50 19·0	139·05
13	12 17 45·94	0 36 24·7	139·13
14	12 19 30·96	0 22 29·9	139·20
15	12 21 16·02	N. 0 8 34·7	139·25
16	12 23 1·11	S. 0 5 20·8	139·32
17	12 24 46·25	0 19 16·7	139·37
18	12 26 31·44	0 33 12·9	139·40
19	12 28 16·68	0 47 9·3	139·43
20	12 30 1·98	1 1 5·9	139·47
21	12 31 47·35	1 15 2·7	139·48
22	12 33 32·78	1 28 59·6	139·50
23	12 35 18·29	1 42 56·6	139·50
24	12 37 3·87	S. 1 56 53·6	

Hour.	Right Ascension.	Declination.	Diff. Dec. for 10m.
	MONDAY 31.		
	h m s	° ′ ″	″
0	12 37 3·87	S. 1 56 53·6	139·52
1	12 38 49·54	2 10 50·7	139·50
2	12 40 35·30	2 24 47·7	139·50
3	12 42 21·15	2 38 44·7	139·47
4	12 44 7·10	2 52 41·5	139·45
5	12 45 53·15	3 6 38·2	139·43
6	12 47 39·30	3 20 34·8	139·38
7	12 49 25·57	3 34 31·1	139·33
8	12 51 11·96	3 48 27·1	139·28
9	12 52 58·47	4 2 22·8	139·22
10	12 54 45·10	4 16 18·1	139·17
11	12 56 31·87	4 30 13·1	139·08
12	12 58 18·77	4 44 7·6	139·00
13	13 0 5·81	4 58 1·6	138·92
14	13 1 53·00	5 11 55·1	138·82
15	13 3 40·33	5 25 48·0	138·72
16	13 5 27·82	5 39 40·3	138·60
17	13 7 15·48	5 53 31·9	138·48
18	13 9 3·30	6 7 22·8	138·37
19	13 10 51·29	6 21 13·0	138·22
20	13 12 39·45	6 35 2·4	138·10
21	13 14 27·80	6 48 51·0	137·93
22	13 16 16·34	7 2 38·6	137·78
23	13 18 5·06	S. 7 16 25·3	137·63
	TUESDAY, JAN. 1, 1856.		
0	13 19 53·98	S. 7 30 11·1	

PHASES OF THE MOON.

		d	h	m
☾	*Last Quarter*	1	2	11·0
●	New Moon	8	22	17·8
☽	*First Quarter*	15	18	56·5
○	Full Moon	22	22	38·7
☾	*Last Quarter*	31	0	

☾	Apogee
☾	Perigee
☾	Apogee

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		Noon.	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Saturn	W.	69 59 29	3069	71 28 17	3069	72 57 5	3068	74 25 54	3067
	Pollux	W.	46 23 48	3077	47 52 26	3077	49 21 4	3078	50 49 41	3076
	Spica ♍	E.	44 27 10	3087	42 58 44	3088	41 30 20	3089	40 1 57	3088
	Venus	E.	44 33 27	3429	43 11 43	3430	41 50 0	3430	40 28 18	3430
	Sun	E.	90 58 55	3469	89 37 56	3470	88 16 58	3469	86 55 59	3469
2	Saturn	W.	81 50 29	3054	83 19 35	3051	84 48 44	3046	86 18 0	3042
	Pollux	W.	58 13 18	3064	59 42 11	3060	61 11 9	3056	62 40 12	3052
	Regulus	W.	22 0 46	3143	23 28 3	3131	24 55 35	3119	26 23 21	3108
	Spica ♍	E.	32 39 53	3084	31 11 24	3082	29 42 53	3081	28 14 20	3079
	Venus	E.	33 39 35	3423	32 17 44	3420	30 55 50	3416	29 33 52	3412
	Sun	E.	80 10 44	3457	78 49 32	3453	77 28 15	3449	76 6 54	3444
3	Saturn	W.	93 45 54	3012	95 15 52	3004	96 46 0	2997	98 16 16	2989
	Pollux	W.	70 7 4	3022	71 36 50	3014	73 6 45	3006	74 36 50	2998
	Regulus	W.	33 45 25	3057	35 14 27	3048	36 43 41	3038	38 13 7	3028
	Sun	E.	69 18 34	3413	67 56 32	3404	66 34 20	3396	65 11 59	3388
4	Saturn	W.	105 50 20	2944	107 21 43	2933	108 53 20	2923	110 25 9	2911
	Pollux	W.	82 9 58	2951	83 41 12	2942	85 12 38	2930	86 44 19	2920
	Regulus	W.	45 43 37	2973	47 14 24	2961	48 45 25	2949	50 16 42	2938
	Sun	E.	58 17 39	3339	56 54 12	3328	55 30 33	3316	54 6 40	3305
5	Pollux	W.	94 26 19	2859	95 59 30	2848	97 32 56	2834	99 6 40	2821
	Regulus	W.	57 56 56	2875	59 29 47	2861	61 2 56	2848	62 36 22	2835
	Sun	E.	47 3 50	3243	45 38 32	3231	44 12 59	3218	42 47 11	3204
6	Regulus	W.	70 27 55	2766	72 3 8	2752	73 38 39	2737	75 14 30	2724
	Spica ♍	W.	16 31 55	2823	18 5 53	2798	19 40 23	2776	21 15 23	2755
	Sun	E.	35 34 13	3139	34 6 51	3125	32 39 12	3113	31 11 18	3100
11	Sun	W.	27 7 59	2674	28 45 14	2664	30 22 42	2656	32 0 21	2648
	Jupiter	E.	41 36 20	2377	39 52 13	2374	38 8 1	2371	36 23 44	2368
	Fomalhaut	E.	47 35 26	2672	45 58 9	2690	44 21 16	2710	42 44 50	2734
	α Pegasi	E.	69 6 42	2722	67 30 31	2728	65 54 28	2735	64 18 34	2743
12	Sun	W.	40 10 50	2621	41 49 16	2618	43 27 47	2614	45 6 23	2611
	Jupiter	E.	27 41 51	2368	25 57 31	2372	24 13 16	2376	22 29 7	2384
	α Pegasi	E.	56 22 43	2816	54 48 36	2837	53 14 56	2862	51 41 48	2890
	α Arietis	E.	96 33 54	2340	94 48 53	2337	93 3 48	2335	91 18 40	2333
13	Sun	W.	53 20 10	2603	54 59 1	2602	56 37 53	2602	58 16 46	2602
	α Pegasi	E.	44 6 39	3093	42 38 21	3151	41 11 13	3217	39 45 24	3291
	α Arietis	E.	82 32 30	2330	80 47 14	2330	79 1 59	2331	77 16 45	2333
14	Sun	W.	66 31 0	2606	68 9 47	2607	69 48 32	2610	71 27 14	2611
	α Aquilæ	W.	43 41 16	4600	44 43 41	4454	45 48 14	4323	46 54 45	4205
	α Arietis	E.	68 31 13	2344	66 46 18	2348	65 1 28	2352	63 16 44	2356
	Aldebaran	E.	98 50 3	2320	97 4 32	2322	95 19 4	2323	93 33 38	2324
	Saturn	E.	118 16 58	2272	116 30 17	2272	114 43 36	2274	112 56 58	2275
15	Sun	W.	79 40 2	2624	81 18 25	2627	82 56 44	2630	84 34 58	2633
	α Aquilæ	W.	52 52 1	3772	54 7 32	3709	55 24 10	3652	56 41 48	3600
	Jupiter	W.	15 7 8	2455	16 49 25	2436	18 32 8	2424	20 15 8	2415
	α Arietis	E.	54 34 49	2385	52 50 52	2392	51 7 6	2400	49 23 31	2409

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.		*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
1	Saturn	W.	75 54 44	3065	77 23 36	3063	78 52 31	3061	80 21 28	3058
	Pollux	W.	52 18 20	3074	53 47 1	3073	55 15 44	3071	56 44 29	3068
	Spica ♍	E.	38 33 33	3088	37 5 9	3088	35 36 45	3087	34 8 20	3086
	Venus	E.	39 6 36	3430	37 44 53	3429	36 23 9	3427	35 1 23	3425
	Sun	E.	85 35 0	3468	84 14 0	3465	82 52 57	3463	81 31 52	3461
2	Saturn	W.	87 47 21	3037	89 16 48	3031	90 46 22	3025	92 16 4	3018
	Pollux	W.	64 9 20	3047	65 38 35	3041	67 7 57	3035	68 37 27	3029
	Regulus	W.	27 51 21	3098	29 19 33	3087	30 47 58	3078	32 16 35	3067
	Spica ♍	E.	26 45 45	3077	25 17 7	3075	23 48 27	3074	22 19 45	3073
	Venus	E.	28 11 49	3408	26 49 42	3404	25 27 30	3399	24 5 12	3394
	Sun	E.	74 45 27	3439	73 23 55	3432	72 2 15	3426	70 40 28	3420
3	Saturn	W.	99 46 43	2981	101 17 20	2971	102 48 9	2963	104 19 8	2953
	Pollux	W.	76 7 5	2989	77 37 31	2981	79 8 8	2971	80 38 57	2961
	Regulus	W.	39 42 47	3017	41 12 39	3006	42 42 45	2995	44 13 4	2984
	Sun	E.	63 49 29	3379	62 26 48	3369	61 3 56	3360	59 40 54	3349
4	Saturn	W.	111 57 12	2901	113 29 29	2891	115 2 0	2880	116 34 45	2868
	Pollux	W.	88 16 13	2908	89 48 22	2896	91 20 46	2884	92 53 25	2873
	Regulus	W.	51 48 13	2925	53 20 0	2913	54 52 2	2900	56 24 21	2887
	Sun	E.	52 42 34	3294	51 18 15	3281	49 53 41	3269	48 28 53	3256
5	Pollux	W.	100 40 40	2808	102 14 57	2795	103 49 32	2782	105 24 24	2768
	Regulus	W.	64 10 5	2821	65 44 5	2807	67 18 24	2794	68 53 0	2779
	Sun	E.	41 21 7	3191	39 54 47	3178	38 28 12	3164	37 1 20	3152
6	Regulus	W.	76 50 38	2709	78 27 6	2695	80 3 52	2681	81 40 57	2667
	Spica ♍	W.	22 50 50	2735	24 26 43	2717	26 3 0	2699	27 39 41	2682
	Sun	E.	29 43 9	3088	28 14 45	3078	26 46 8	3066	25 17 17	3057
11	Sun	W.	33 38 11	2642	35 16 9	2636	36 54 15	2630	38 32 29	2625
	Jupiter	E.	34 39 24	2366	32 55 1	2366	31 10 38	2366	29 26 14	2366
	Fomalhaut	E.	41 8 56	2763	39 33 39	2796	37 59 6	2835	36 25 23	2880
	α Pegasi	E.	62 42 51	2753	61 7 22	2766	59 32 9	2780	57 57 15	2797
12	Sun	W.	46 45 3	2609	48 23 46	2607	50 2 32	2605	51 41 20	2604
	Jupiter	E.	20 45 9	2394	19 1 25	2407	17 18 0	2426	15 35 2	2452
	α Pegasi	E.	50 9 16	2921	48 37 24	2957	47 6 17	2997	45 36 0	3042
	α Arietis	E.	89 33 29	2332	87 48 16	2331	86 3 2	2330	84 17 46	2330
13	Sun	W.	59 55 38	2602	61 34 30	2603	63 13 21	2604	64 52 11	2604
	α Pegasi	E.	38 21 2	3376	36 58 18	3474	35 37 25	3585	34 18 34	3714
	α Arietis	E.	75 31 33	2334	73 46 23	2336	72 1 16	2338	70 16 12	2341
14	Sun	W.	73 5 54	2613	74 44 31	2615	76 23 5	2618	78 1 35	2621
	α Aquilæ	W.	48 3 6	4101	49 13 7	4006	50 24 41	3919	51 37 42	3842
	α Arietis	E.	61 32 6	2361	59 47		58 3 11	2372	56 18 56	2378
	Aldebaran	E.	91 48 14	2326	90 2		88 17 35	2331	86 32 21	2334
	Saturn	E.	111 10 21	2276	109 2		7 37 14	2280	105 50 45	2282
15	Sun	W.	86 13 8	2636	0-		19 1		91 7 11	2648
	α Aquilæ	W.	58 0 22	3					62 0 55	3438
	Jupiter	W.	21 58 21	2					7 8 43	2401
	α Arietis	E.	47 40 9						1 29	2453

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″
15	Aldebaran E.	84 47 11	2337	83 2 5	2340	81 17 4	2343	79 32 7
	Saturn E.	104 4 19	2284	102 17 56	2287	100 31 37	2289	98 45 22
16	Sun W.	92 45 1	2651	94 22 47	2655	96 0 27	2660	97 38 1
	α Aquilæ W.	63 22 28	3407	64 44 37	3379	66 7 17	3354	67 30 26
	Jupiter W.	28 52 16	2401	30 35 50	2401	32 19 24	2402	34 2 56
	α Arietis E.	40 49 10	2467	39 7 10	2482	37 25 32	2500	35 44 18
	Aldebaran E.	70 48 49	2368	69 4 28	2373	67 20 14	2378	65 36 7
	Saturn E.	89 55 11	2308	88 9 23	2312	86 23 41	2315	84 38 4
17	Sun W.	105 44 24	2687	107 21 22	2692	108 58 13	2696	110 34 58
	α Aquilæ W.	74 31 45	3254	75 56 50	3245	77 22 6	3237	78 47 32
	Jupiter W.	42 39 54	2416	44 23 6	2419	46 6 13	2424	47 49 14
	Fomalhaut W.	42 32 30	2761	44 7 49	2740	45 43 36	2722	47 19 47
	Aldebaran E.	56 57 39	2414	55 14 25	2421	53 31 21	2429	51 48 28
	Saturn E.	75 51 28	2340	74 6 27	2346	72 21 34	2350	70 36 47
18	Sun W.	118 36 52	2730	120 12 52	2736	121 48 44	2742	123 24 28
	Jupiter W.	56 22 59	2448	58 5 25	2453	59 47 44	2458	61 29 57
	Fomalhaut W.	55 24 59	2657	57 2 37	2652	58 40 22	2647	60 18 13
	Aldebaran E.	43 17 14	2487	41 35 43	2500	39 54 30	2513	38 13 35
	Saturn E.	61 54 43	2382	60 10 42	2388	58 26 50	2394	56 43 6
	Pollux E.	86 39 19	2385	84 55 22	2390	83 11 33	2394	81 27 50
19	Jupiter W.	69 59 9	2491	71 40 35	2497	73 21 53	2502	75 3 3
	Fomalhaut W.	68 28 10	2640	70 6 11	2642	71 44 9	2643	73 22 5
	α Pegasi W.	49 41 41	3053	51 10 48	3030	52 40 23	3009	54 10 25
	Aldebaran E.	29 55 1	2633	28 16 51	2663	26 39 22	2698	25 2 40
	Saturn E.	48 6 49	2436	46 24 5	2443	44 41 32	2452	42 59 11
	Pollux E.	72 51 16	2429	71 8 22	2434	69 25 36	2441	67 42 59
20	Jupiter W.	83 26 36	2543	85 6 50	2550	86 46 54	2557	88 26 48
	Fomalhaut W.	81 30 33	2668	83 7 56	2674	84 45 11	2680	86 22 17
	α Pegasi W.	61 45 12	2934	63 16 48	2928	64 48 32	2923	66 20 22
	Saturn E.	34 30 49	2513	32 49 54	2527	31 9 18	2541	29 29 2
	Pollux E.	59 12 13	2481	57 30 33	2488	55 49 3	2495	54 7 43
	Regulus E.	95 46 11	2490	94 4 43	2497	92 23 25	2504	90 42 18
21	Jupiter W.	96 43 35	2605	98 22 23	2614	100 0 59	2623	101 39 22
	α Pegasi W.	74 0 13	2918	75 32 9	2920	77 4 2	2924	78 35 51
	α Arietis W.	30 29 22	2778	32 4 19	2765	33 39 33	2755	35 15 0
	Pollux E.	45 43 47	2544	44 3 35	2552	42 23 34	2561	40 43 45
	Regulus E.	82 19 19	2551	80 39 17	2560	78 59 27	2569	77 19 49
	Mars E.	117 48 43	2692	116 11 52	2700	114 35 12	2709	112 58 44
22	α Pegasi W.	86 13 10	2962	87 44 11	2970	89 15 1	2979	90 45 40
	α Arietis W.	43 13 41	2741	44 49 27	2743	46 25 10	2746	48 0 49
	Pollux E.	32 27 54	2618	30 49 24	2628	29 11 7	2639	27 33 5
	Regulus E.	69 4 45	2624	67 26 23	2634	65 48 14	2644	64 10 19
	Mars E.	104 59 25	2765	103 24 11	2774	101 49 9	2785	100 14 21
23	α Arietis W.	55 57 26	2779	57 32 21	2787	59 7 6	2795	60 41 41
	Aldebaran W.	25 57 46	2935	27 29 21	2920	29 1 14	2910	30 33 20
	Regulus E.	56 4 16	2708	54 27 46	2719	52 51 32	2730	51 15 32

MEAN TIME.

LUNAR DISTANCES.

Day of the Month	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
15	Aldebaran E.	77 47 16	2351	76 2 30	2355	74 17 50	2359	72 33 16	2364
	Saturn E.	96 59 11	2295	95 13 4	2298	93 27 2	2301	91 41 4	2304
16	Sun W.	99 15 30	2668	100 52 53	2673	102 30 9	2677	104 7 20	2682
	α Aquilæ W.	68 54 1	3312	70 17 59	3294	71 42 17	3279	73 6 53	3265
	Jupiter W.	35 46 26	2405	37 29 53	2407	39 13 17	2410	40 56 37	2412
	α Arietis E.	34 3 32	2542	32 23 17	2567	30 43 37	2597	29 4 38	2631
	Aldebaran E.	63 52 8	2389	62 8 18	2395	60 24 36	2401	58 41 2	2408
	Saturn E.	82 52 33	2323	81 7 7	2328	79 21 48	2332	77 36 35	2336
17	Sun W.	112 11 35	2707	113 48 5	2713	115 24 28	2718	117 0 44	2724
	α Aquilæ W.	80 13 5	3226	81 38 43	3223	83 4 25	3221	84 30 9	3220
	Jupiter W.	49 32 11	2431	51 15 2	2435	52 57 47	2439	54 40 26	2443
	Fomalhaut W.	48 56 19	2693	50 33 8	2681	52 10 13	2672	53 47 31	2664
	Aldebaran E.	50 5 47	2446	48 23 18	2455	46 41 2	2466	44 59 1	2476
	Saturn E.	68 52 7	2360	67 7 35	2365	65 23 10	2370	63 38 53	2375
18	Sun W.	125 0 3	2755	126 35 30	2762	128 10 48	2769	129 45 56	2776
	Jupiter W.	63 12 2	2468	64 54 0	2473	66 35 51	2479	68 17 34	2485
	Fomalhaut W.	61 56 8	2641	63 34 7	2640	65 12 7	2639	66 50 9	2640
	Aldebaran E.	36 33 2	2545	34 52 51	2563	33 13 5	2583	31 33 47	2607
	Saturn E.	54 59 31	2407	53 16 6	2413	51 32 50	2420	49 49 44	2428
	Pollux E.	79 44 16	2405	78 0 49	2411	76 17 30	2417	74 34 19	2422
19	Jupiter W.	76 44 4	2515	78 24 56	2522	80 5 39	2529	81 46 12	2535
	Fomalhaut W.	74 59 56	2649	76 37 44	2654	78 15 26	2658	79 53 3	2663
	α Pegasi W.	55 40 48	2976	57 11 31	2962	58 42 31	2951	60 13 45	2941
	Aldebaran E.	23 26 53	2790	21 52 12	2852	20 18 51	2927	18 47 6	3022
	Saturn E.	41 17 3	2470	39 35 8	2480	37 53 26	2491	36 12 0	2502
	Pollux E.	66 0 31	2454	64 18 13	2460	62 36 3	2467	60 54 3	2474
20	Jupiter W.	90 6 31	2572	91 46 4	2580	93 25 26	2589	95 4 36	2597
	Fomalhaut W.	87 59 15	2694	89 36 3	2702	91 12 40	2710	92 49 7	2719
	α Pegasi W.	67 52 17	2916	69 24 15	2915	70 56 15	2916	72 28 14	2916
	Saturn E.	27 49 7	2574	26 9 37	2593	24 30 33	2615	22 51 59	2642
	Pollux E.	52 26 34	2510	50 45 35	2519	49 4 48	2527	47 24 12	2535
	Regulus E.	89 1 20	2520	87 20 34	2527	85 39 58	2535	83 59 33	2543
21	Jupiter W.	103 17 34	2641	104 55 33	2650	106 33 20	2660	10[illegible]	669
	α Pegasi W.	80 7 33	2933	81 39 10	2939	83 10 39	2946		4
	α Arietis W.	36 50 36	2743	38 26 19	2741	40 2 5	273		
	Pollux E.	39 4 9	2579	37 24 45	2589	35 45 35	25[illegible]		
	Regulus E.	75 40 23	2586	74 1 9	2596	72 22 8	[illegible]		
	Mars E.	111 22 28	2727	109 46 24	2736	108 10 32			
22	α Pegasi W.	92 16 5	3001	93 46 17	3012	95 16 15			
	α Arietis W.	49 36 22	2755	51 11 49	2760	52 47 0			
	Pollux E.	25 55 18	2661	24 17 46	2672	22 40 [illegible]			
	Regulus E.	62 32 38	2665	60 55 11	2675	59 17 [illegible]			
	Mars E.	98 39 45	2804	97 5 23	2815	95 31			
23	α Arietis W.	62 16 6	2811	63 50 19	2819	65 24			
	Aldebaran W.	32 5 35	2898	33 37 56	2895	35 10			
	Regulus E.	49 39 48	2753	48 4 18	2766	46			

MEAN TIME.

LUNAR DISTANCES.

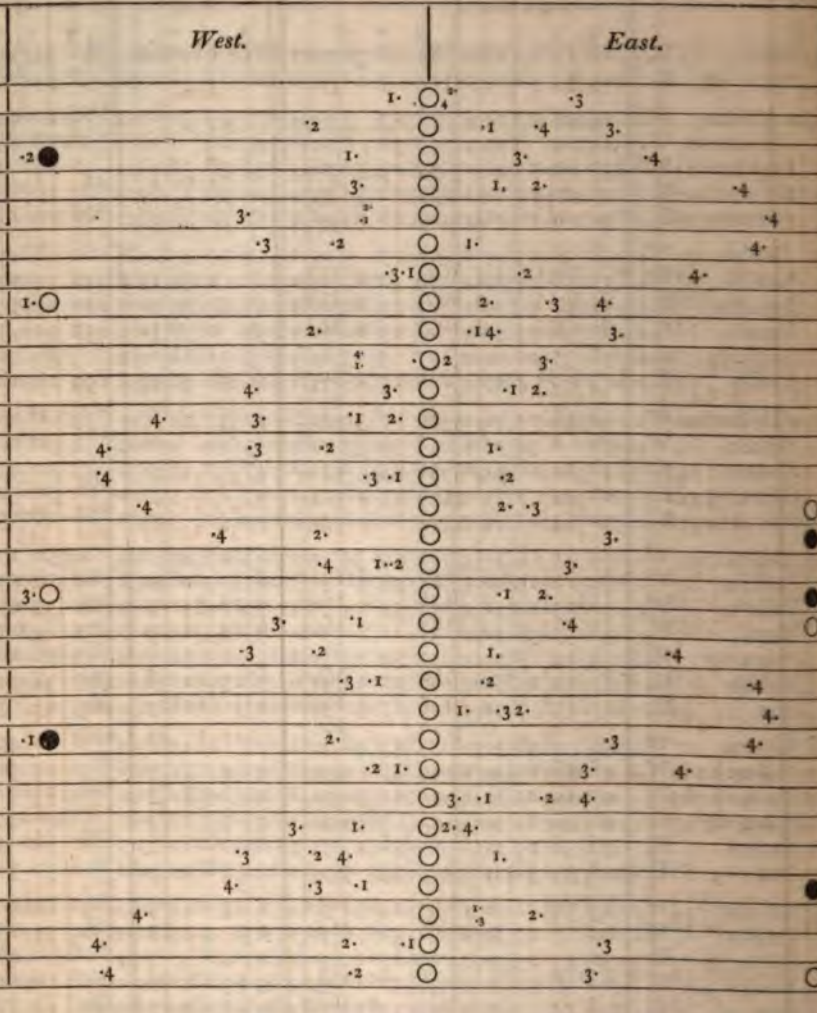
Day of the Month.	Star's Name and Position.		*Noon.*	P.L. of diff.	III^h.	P.L. of diff.	VI^h.	P.L. of diff.	IX^h.	P.L. of diff.
			° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	Mars	E.	92 23 38	2846	90 50 10	2857	89 16 56	2868	87 43 56	2879
	Spica ♍	E.	110 5 27	2698	108 28 44	2708	106 52 15	2718	105 15 59	2729
24	α Arietis	W.	68 31 51	2846	70 5 19	2856	71 38 34	2866	73 11 37	2876
	Aldebaran	W.	38 15 10	2898	39 47 32	2901	41 19 49	2905	42 52 2	2910
	Regulus	E.	43 19 24	2801	41 44 58	2813	40 10 47	2826	38 36 53	2838
	Mars	E.	80 2 25	2934	78 30 49	2945	76 59 27	2956	75 28 19	2966
	Spica ♍	E.	97 18 14	2783	95 43 24	2793	94 8 47	2804	92 34 24	2815
25	Aldebaran	W.	50 31 21	2940	52 2 49	2948	53 34 7	2955	55 5 16	2963
	Saturn	W.	31 49 47	2899	33 22 7	2905	34 54 20	2910	36 26 26	2916
	Regulus	E.	30 51 35	2906	29 19 24	2921	27 47 32	2937	26 16 0	2954
	Mars	E.	67 56 3	3022	66 26 17	3032	64 56 44	3042	63 27 23	3052
	Spica ♍	E.	84 46 0	2868	83 13 0	2879	81 40 14	2889	80 7 41	2898
	Venus	E.	109 16 30	3274	107 51 48	3286	106 27 20	3297	105 3 5	3309
26	Aldebaran	W.	62 38 36	3001	64 8 47	3009	65 38 49	3016	67 8 42	3024
	Saturn	W.	44 4 50	2950	45 36 5	2958	47 7 10	2965	48 38 7	2973
	Mars	E.	56 3 48	3102	54 35 41	3111	53 7 45	3120	51 40 0	3129
	Spica ♍	E.	72 28 6	2948	70 56 48	2957	69 25 41	2966	67 54 46	2974
	Venus	E.	98 5 6	3363	96 42 7	3373	95 19 20	3384	93 56 45	3394
27	Aldebaran	W.	74 35 49	3059	76 4 49	3065	77 33 41	3071	79 2 26	3077
	Saturn	W.	56 10 39	3006	57 40 45	3012	59 10 43	3017	60 40 35	3023
	Pollux	W.	30 26 59	3015	31 56 53	3022	33 26 39	3027	34 56 18	3034
	Mars	E.	44 23 50	3169	42 57 4	3177	41 30 27	3183	40 3 57	3190
	Spica ♍	E.	60 22 49	3015	58 52 55	3022	57 23 10	3029	55 53 33	3036
	Venus	E.	87 6 31	3439	85 44 58	3447	84 23 34	3455	83 2 19	3462
	Sun	E.	133 16 7	3418	131 54 11	3424	130 32 22	3431	129 10 41	3438
28	Saturn	W.	68 8 13	3047	69 37 28	3050	71 6 39	3053	72 35 46	3057
	Pollux	W.	42 22 49	3058	43 51 50	3062	45 20 46	3066	46 49 37	3069
	Mars	E.	32 53 17	3216	31 27 27	3220	30 1 42	3224	28 36 1	3227
	Spica ♍	E.	48 27 26	3064	46 58 33	3069	45 29 45	3073	44 1 2	3077
	Venus	E.	76 18 2	3494	74 57 31	3498	73 37 5	3503	72 16 44	3508
	Sun	E.	122 23 53	3463	121 2 48	3467	119 41 47	3471	118 20 51	3474
29	Saturn	W.	80 0 32	3065	81 29 24	3066	82 58 15	3066	84 27 6	3065
	Pollux	W.	54 13 7	3078	55 41 43	3079	57 10 18	3078	58 38 54	3079
	Spica ♍	E.	36 38 32	3091	35 10 12	3093	33 41 54	3095	32 13 38	3096
	Venus	E.	65 36 3	3523	64 16 4	3524	62 56 6	3525	61 36 10	3525
	Sun	E.	111 36 54	3484	110 16 12	3485	108 55 31	3484	107 34 49	3484
30	Saturn	W.	91 51 39	3057	93 20 41	3055	94 49 46	3051	96 18 56	3047
	Pollux	W.	66 2 8	3069	67 30 55	3067	68 59 45	3063	70 28 40	3059
	Regulus	W.	29 40 23	3110	31 8 20	3104	32 36 25	3098	34 4 37	3091
	Venus	E.	54 56 25	3521	53 36 24	3519	52 16 21	3516	50 56 15	3513
	Sun	E.	100 51 4	3474	99 30 11	3471	98 9 15	3466	96 48 13	3462
31	Saturn	W.	103 46 11	3019	105 16 0	3013	106 45 56	3006	108 16 2	2998
	Pollux	W.	77 54 45	3030	79 24 20	3023	80 54 4	3016	82 23 57	3008
	Regulus	W.	41 27 51	3052	42 56 59	3044	44 26 17	3035	45 55 46	3026
	Venus	E.	44 14 41	3490	42 54 6	3485	41 33 25	3479	40 12 37	3473
	Sun	E.	90 1 39	3431	88 39 58	3424	87 18 9	3416	85 56 11	3407

MEAN TIME.

LUNAR DISTANCES.

Day of the Month.	Star's Name and Position.	*Midnight.*	P.L. of diff.	XV^h.	P.L. of diff.	XVIII^h.	P.L. of diff.	XXI^h.	P.L. of diff.
		° ′ ″		° ′ ″		° ′ ″		° ′ ″	
23	Mars E.	86 11 10	2890	84 38 38	2901	83 6 20	2911	81 34 15	2923
	Spica ♍ E.	103 39 58	2740	102 4 11	2750	100 28 38	2761	98 53 19	2772
24	α Arietis W.	74 44 27	2885	76 17 5	2895	77 49 31	2905	79 21 44	2915
	Aldebaran W.	44 24 8	2915	45 56 8	2920	47 28 1	2927	48 59 45	2934
	Regulus E.	37 3 15	2852	35 29 54	2865	33 56 50	2879	32 24 4	2892
	Mars E.	73 57 24	2978	72 26 44	2989	70 56 17	2999	69 26 3	3010
	Spica ♍ E.	91 0 16	2825	89 26 21	2836	87 52 40	2847	86 19 13	2858
25	Aldebaran W.	56 36 15	2970	58 7 5	2978	59 37 45	2986	61 8 15	2993
	Saturn W.	37 58 24	2923	39 30 13	2930	41 1 54	2936	42 33 27	2944
	Regulus E.	24 44 49	2970	23 13 59	2989	21 43 33	3010	20 13 33	3033
	Mars E.	61 58 15	3063	60 29 20	3073	59 0 38	3082	57 32 7	3092
	Spica ♍ E.	78 35 20	2909	77 3 13	2919	75 31 18	2929	73 59 36	2939
	Venus E.	103 39 4	3319	102 15 15	3331	100 51 40	3341	99 28 16	3353
26	Aldebaran W.	68 38 25	3031	70 7 59	3038	71 37 24	3045	73 6 41	3052
	Saturn W.	50 8 54	2979	51 39 33	2985	53 10 4	2993	54 40 26	3000
	Mars E.	50 12 26	3138	48 45 3	3146	47 17 49	3154	45 50 45	3162
	Spica ♍ E.	66 24 1	2984	64 53 28	2992	63 23 5	3000	61 52 52	3008
	Venus E.	92 34 21	3403	91 12 8	3412	89 50 5	3422	88 28 13	3431
27	Aldebaran W.	80 31 4	3083	81 59 34	3087	83 27 59	3093	84 56 17	3097
	Saturn W.	62 10 19	3029	63 39 56	3033	65 9 28	3038	66 38 53	3043
	Pollux W.	36 25 49	3039	37 55 14	3045	39 24 31	3049	40 53 43	3054
	Mars E.	38 37 36	3195	37 11 21	3202	35 45 14	3207	34 19 13	3211
	Spica ♍ E.	54 24 5	3043	52 54 45	3048	51 25 32	3054	49 56 26	3059
	Venus E.	81 41 13	3469	80 20 14	3476	78 59 23	3482	77 38 39	3488
	Sun E.	127 49 7	3444	126 27 40	3448	125 6 18	3454	123 45 3	3459
28	Saturn W.	74 4 48	3059	75 33 48	3061	77 2 45	3063	78 31 40	3065
	Pollux W.	48 18 25	3072	49 47 9	3074	51 15 51	3076	52 44 30	3078
	Mars E.	27 10 24	3230	25 44 50	3232	24 19 20	3234	22 53 51	3234
	Spica ♍ E.	42 32 24	3081	41 3 51	3083	39 35 21	3087	38 6 55	3089
	Venus E.	70 56 29	3511	69 36 17	3515	68 16 10	3517	66 56 5	3520
	Sun E.	116 59 58	3478	115 39 9	3480	114 18 22	3481	112 57 37	3483
29	Saturn W.	85 55 58	3065	87 24 51	3064	88 53 44	3062	90 22 40	3060
	Pollux W.	60 7 29	3078	61 36 6	3077	63 4 44	3074	64 33 25	3073
	Spica ♍ E.	30 45 23	3097	29 17 10	3097	27 48 57	3099	26 20 46	3099
	Venus E.	60 16 14	3525	58 56 18	3525	57 36 21	3524	56 16 24	3523
	Sun E.	106 14 7	3483	104 53 24	3482	103 32 40	3480	102 11 53	3478
30	Saturn W.	97 48 11	3042	99 17 32	3038	100 46 58	3032	102 16	
	Pollux W.	71 57 40	3054	73 26 46	3049	74 55 58	3043	76	
	Regulus W.	35 32 58	3083	37 1 28	3077	38 30 6	3069	39	
	Venus E.	49 36 5	3509	48 15 51	3506	46 55 33	3501	45	
	Sun E.	95 27 7	3457	94 5 55	3452	92 44 37	3446	91	
31	Saturn W.	109 46 17	2990	111 16 42	2982	112 47 17	2973	11	
	Pollux W.	83 54 0	2999	85 24 14	2990	86 54 39	2981	8	
	Regulus W.	47 25 26	3017	48 55 17	3007	50 25 21	2997		
	Venus E.	38 51 43	3466	37 30 41	3460	36 9 32	3453		
	Sun E.	84 34 2	3398	83 11 43	3388	81 49 13	3378		

CONFIGURATIONS OF THE SATELLITES OF JUPITER,

At 6h, Mean Time.

This Table represents, at 6h after *Mean Noon* of each day of the Month, the relative positions of the images of Jupiter and his Satellites, as they would appear (disregarding their latitudes) in an inverting telescope. Jupiter is indicated by the white circles (○) in the centre of the page; the Satellites by points. The numerals, 1, 2, 3, and 4, annexed to the points, serve to distinguish the Satellites from each other; and their positions are such as to indicate the directions of the Satellites' motions, which are in all cases to be considered as *towards the numerals*. When a Satellite is at its greatest elongation, the point is placed above or below the centre of the numeral. A white circle (○) at the left or right hand of the page, denotes that the Satellite placed by the side of it is *on* the disc of Jupiter, and a black circle (●) that it is either *behind* the disc, or in the shadow, of Jupiter.

Day of the Month.	For correcting the Places of the Fixed Stars. At Mean Midnight, Logarithm of A	B	C	D	Mean Time of Transit of the First Point of Aries.	Mean Equinoctial Time, adding 0ˢ·418488. Days.	From Mean Noon of January 1. Day of the Year.	Fraction of the Year.
					h m s			
1	+0·8212	+1·2811	+9·8586	−0·8702	7 19 40·87	253	334	·914
2	0·8003	1·2839	9·8608	0·8697	7 15 44·96	254	335	·917
3	0·7781	1·2866	9·8630	0·8693	7 11 49·05	255	336	·920
4	+0·7547	+1·2891	+9·8653	−0·8689	7 7 53·13	256	337	·923
5	0·7297	1·2915	9·8675	0·8685	7 3 57·22	257	338	·925
6	0·7031	1·2937	9·8697	0·8681	7 0 1·31	258	339	·928
7	+0·6746	+1·2958	+9·8719	−0·8678	6 56 5·40	259	340	·931
8	0·6439	1·2977	9·8741	0·8675	6 52 9·48	260	341	·934
9	0·6107	1·2995	9·8763	0·8673	6 48 13·57	261	342	·936
10	+0·5747	+1·3012	+9·8785	−0·8671	6 44 17·66	262	343	·939
11	0·5352	1·3027	9·8807	0·8669	6 40 21·75	263	344	·942
12	0·4916	1·3040	9·8829	0·8667	6 36 25·83	264	345	·945
13	+0·4429	+1·3053	+9·8850	−0·8666	6 32 29·92	265	346	·947
14	0·3880	1·3063	9·8872	0·8666	6 28 34·01	266	347	·950
15	0·3249	1·3073	9·8894	0·8665	6 24 38·09	267	348	·953
16	+0·2509	+1·3081	+9·8916	−0·8666	6 20 42·18	268	349	·956
17	0·1615	1·3088	9·8937	0·8666	6 16 46·27	269	350	·958
18	0·0486	1·3093	9·8959	0·8667	6 12 50·35	270	351	·961
19	+9·8953	+1·3097	+9·8980	−0·8668	6 8 54·44	271	352	·964
20	9·6561	1·3099	9·9001	0·8670	6 4 58·53	272	353	·966
21	+9·0797	1·3101	9·9023	0·8672	6 1 2·62	273	354	·969
22	−9·3281	+1·3100	+9·9044	−0·8675	5 57 6·70	274	355	·972
23	9·7371	1·3099	9·9065	0·8678	5 53 10·79	275	356	·975
24	9·9438	1·3096	9·9086	0·8681	5 49 14·88	276	357	·977
25	−0·0832	+1·3092	+9·9107	−0·8685	5 45 18·96	277	358	·980
26	0 1885	1·3086	9·9127	0·8689	5 41 23·05	278	359	·983
27	0·2731	1·3079	9·9148	0·8694	5 37 27·14	279	360	·986
28	−0·3437	+1·3070	+9·9168	−0·8699	5 33 31·22			988
29	0·4043	1·3060	9·9189	0·8704	5 29 35·31			991
30	0·4574	1·3049	9·9209	0·8709	5 25 39·[illegible]			994
31	0·5046	1·3037	9·9229	0·8715	5 21 4[illegible]			[illegible]7
32	−0·5470	+1·3022	+9·9249	−0·8722	5 17			

Mean Noon.	Apparent Obliquity.	The Sun's Horizontal Parallax.	The Sun's Aberration.	Precession in Longitude.	Equation of Equinoxes. In Long.	Equation of Equinoxes. In A. R. (*in time*)	Mean Longitude of ☊'s ascending Node.
	° ′						
	23 27						
1855.	″	″	″	″	″	s	° ′
Jan. 1	35·18	8·72	−20·77	0·00	−12·49	−0·76	49 28·2
11	35·33	8·72	20·76	1·38	12·01	0·73	48 56·4
21	35·53	8·71	20·74	2·75	11·62	0·71	48 24·6
31	35·77	8·70	20·72	4·13	11·38	0·70	47 52·8
Feb. 10	36·01	8·69	20·68	5·51	11·29	0·69	47 21·0
20	36·23	8·67	20·64	6·88	11·35	0·69	46 49·3
Mar. 2	36·42	8·65	20·59	8·26	11·54	0·71	46 17·5
12	36·55	8·63	20·54	9·63	11·81	0·72	45 45·8
22	36·62	8·61	20·48	11·01	12·14	0·74	45 14·0
Apr. 1	36·63	8·58	20·42	12·39	12·44	0·76	44 42·2
11	36·58	8·56	20·36	13·76	12·69	0·78	44 10·4
21	36·48	8·53	20·31	15·14	12·83	0·78	43 38·6
May 1	36·35	8·51	20·26	16·51	12·85	0·79	43 6·9
11	36·21	8·49	20·21	17·89	12·73	0·78	42 35·1
21	36·08	8·47	20·17	19·27	12·47	0·76	42 3·3
31	35·98	8·46	20·14	20·65	12·08	0·74	41 31·6
June 10	35·93	8·45	20·11	22·02	11·61	0·71	40 59·8
20	35·93	8·44	20·09	23·40	11·09	0·68	40 28·0
30	35·99	8·44	20·09	24·77	10·55	0·65	39 56·3
July 10	36·11	8·44	20·10	26·15	10·06	0·61	39 24·5
20	36·28	8·44	20·10	27·53	9·64	0·59	38 52·7
30	36 48	8·45	20·12	28·91	9·32	0·57	38 20·9
Aug. 9	36·70	8·46	20·15	30·28	9·15	0·56	37 49·2
19	36·92	8·48	20·19	31·66	9·12	0·56	37 17·4
29	37·11	8·50	20·23	33·03	9·21	0·56	36 45·6
Sept. 8	37·26	8·52	20·28	34·41	9·40	0·57	36 13·8
18	37·36	8·54	20·33	35·78	9·68	0·59	35 42·1
28	37·40	8·57	20·39	37·16	9·98	0·61	35 10·3
Oct. 8	37·37	8·59	20·45	38·54	10·26	0·63	34 38·5
18	37·29	8·61	20·51	39·91	10·46	0·64	34 6·7
28	37·16	8·64	20·56	41·29	10·55	0·64	33 35·0
Nov. 7	37·00	8·66	20·61	42·67	10·50	0·64	33 3·2
17	36·85	8·68	20·66	44·04	10·30	0·63	32 31·4
27	36·71	8·70	20·70	45·42	9·95	0 61	31 59·6
Dec. 7	36·62	8·71	20·73	46·80	9·48	0·58	31 27·9
17	36·58	8·71	20·76	48·17	8·93	0·55	30 56·1
27	36·62	8·72	20·77	49·55	8·34	0·51	30 24·3
37	36·71	8·72	−20·77	50·92	− 7·80	−0·48	29 52·6

	° ′ ″	Daily Motion ′
Mean Obliquity, Jan. 1, 1855 - - - - -	23 27 29·67	
Precession of the Equinoxes for the Year 1855	50·2369	
——————— for 1 Day	0·1376	−3·18

Mean Noon.		X	Δ X	Y	Δ Y	Z	Δ Z
Jan.	1	+0·1805355	+586	−0·8865964	− 2	−0·3847631	+280
	2	·1976959	574	·8835112	+ 6	·3834243	283
	3	·2147947	563	·8801526	13	·3819669	286
	4	·2318270	551	·8765216	20	·3803912	289
	5	·2487878	540	·8726188	27	·3786975	292
	6	·2656725	529	·8684460	34	·3768865	294
	7	·2824755	517	·8640034	40	·3749587	296
	8	·2991920	505	·8592922	46	·3729143	298
	9	·3158169	494	·8543140	52	·3707539	300
	10	·3323452	483	·8490704	57	·3684784	302
	11	·3487720	472	·8435616	62	·3660878	303
	12	·3650915	461	·8377898	67	·3635830	304
	13	·3812987	450	·8317566	72	·3609648	305
	14	·3973883	439	·8254640	77	·3582340	306
	15	·4133547	428	·8189124	81	·3553910	307
	16	·4291929	417	·8121055	85	·3524370	308
	17	·4448975	406	·8050446	89	·3493728	308
	18	·4604633	395	·7977322	93	·3461994	308
	19	·4758852	384	·7901707	97	·3429179	308
	20	·4911583	373	·7823627	100	·3395295	307
	21	·5062779	363	·7743112	103	·3360355	307
	22	·5212386	352	·7660192	106	·3324369	306
	23	·5360357	342	·7574889	109	·3287351	305
	24	·5506651	332	·7487244	111	·3249315	304
	25	·5651224	322	·7397277	113	·3210272	303
	26	·5794031	312	·7305027	115	·3170239	302
	27	·5935036	302	·7210525	116	·3129228	300
	28	·6074193	292	·7113799	117	·3087251	298
	29	·6211463	282	·7014888	118	·3044328	296
	30	·6346810	272	·6913826	119	·3000470	294
	31	·6480199	262	·6810635	120	·2955687	292
Feb.	1	·6611586	252	·6705352	121	·2909997	289
	2	·6740940	242	·6598009	121	·2863413	286
	3	·6868223	232	·6488636	121	·2815948	283
	4	·6993402	223	·6377269	121	·2767618	280
	5	·7116437	214	·6263933	121	·2718433	277
	6	·7237292	205	·6148670	122	·2668412	274
	7	·7355932	197	·6031507	122	·2617567	271
	8	·7472319	189	·5912478	122	·2565911	268
	9	·7586417	181	·5791624	122	·2513463	
	10	·7698195	173	·5668970	122	·2460234	
	11	·7807610	165	·5544560	122	·2406243	
	12	·7914629	157	·5418433	121	·2351506	
	13	·8019215	150	·5290626	120	·2296042	
	14	·8121338	143	·5161181	119	·2239861	
	15	·8220958	136	·5030140	118	·2182	
	16	+0·8318046	+129	−0·4897541	+117	−0·2125	

Mean Noon.	X	ΔX	Y	ΔY	Z	ΔZ
Feb. 16	+0·8318046	+129	−0·4897541	+117	−0·2125451	+234
17	·8412572	122	·4763433	116	·2067252	229
18	·8504504	115	·4627865	115	·2008417	224
19	·8593820	108	·4490874	114	·1948966	219
20	·8680494	102	·4352513	112	·1888920	213
21	·8764496	96	·4212824	111	1828298	208
22	·8845806	90	·4071857	109	·1767121	203
23	·8924404	84	·3929655	107	·1705408	197
24	·9000272	79	·3786269	105	·1643181	191
25	·9073392	74	·3641740	103	·1580458	185
26	·9143744	68	·3496117	101	·1517260	179
27	·9211316	63	·3349442	99	·1453606	173
28	·9276092	58	·3201770	97	·1389519	167
March 1	·9338054	53	·3053134	96	·1325014	161
2	·9397194	48	·2903582	95	·1260111	155
3	·9453494	44	·2753156	93	·1194829	149
4	·9506940	40	·2601899	91	·1129186	142
5	·9557520	36	·2449856	89	·1063201	135
6	·9605227	32	·2297067	87	·0996894	128
7	·9650044	28	·2143577	85	·0930281	121
8	·9691950	25	·1989431	84	·0863384	115
9	·9730942	22	·1834674	82	·0796222	108
10	·9767010	19	·1679352	80	·0728815	101
11	·9800132	17	·1523510	78	·0661182	94
12	·9830304	15	·1367190	76	·0593341	87
13	·9857512	12	·1210444	74	·0525315	80
14	9881747	10	·1053322	72	·0457127	73
15	·9903007	8	·0895872	69	·0388796	66
16	·9921280	6	·0738143	67	·0320344	59
17	·9936563	4	·0580186	64	·0251793	51
18	·9948845	+ 2	·0422050	62	·0183164	44
19	·9958130	0	·0263788	60	·0114480	36
20	·9964420	− 2	− ·0105450	57	− ·0045764	29
21	·9967719	4	+ ·0052914	55	+ ·0022964	21
22	·9968030	5	·0211255	53	·0091682	14
23	·9965350	5	·0369520	50	·0160366	+ 7
24	·9959690	4	·0527659	48	·0228996	0
25	·9951065	3	·0685626	46	·0297552	− 7
26	·9939470	3	·0843376	43	·0366013	15
27	·9924925	3	·1000861	41	·0434360	23
28	·9907435	2	·1158035	38	·0502571	30
29	·9887015	2	·1314856	36	·0570629	37
30	·9863670	1	·1471273	34	·0638512	44
31	·9837422	1	·1627249	31	·0706203	51
April 1	·9808270	− 1	·1782740	28	·0773684	59
2	·9776229	0	·1937705	25	·0840937	67
3	+0·9741314	+ 2	+0·2092100	+ 23	+0·0907942	− 74

Mean Noon.	X	Δ X	Y	Δ Y	Z	Δ Z
April 3	+0·9741314	+ 2	+0·2092100	+ 23	+0·0907942	− 74
4	·9703534	4	·2245884	21	·0974682	81
5	·9662904	6	·2399021	18	·1041141	88
6	·9619434	8	·2551461	15	·1107298	95
7	·9573132	10	·2703163	12	·1173135	103
8	·9524014	12	·2854083	9	·1238632	110
9	·9472094	15	·3004176	6	·1303770	117
10	·9417379	18	·3153402	+ 3	·1368532	124
11	·9359892	21	·3301715	0	·1432897	131
12	·9299644	24	·3449070	− 2	·1496847	138
13	·9236660	27	·3595420	4	·1560361	145
14	·9170950	30	·3740721	6	·1623419	151
15	·9102544	33	·3884930	8	·1686003	157
16	·9031460	36	·4027999	10	·1748094	163
17	·8957716	40	·4169888	13	·1809670	170
18	·8881344	44	·4310549	15	·1870716	177
19	·8802368	48	·4449940	18	·1931209	183
20	·8720822	53	·4588024	20	·1991135	189
21	·8636734	58	·4724761	23	·2050476	195
22	·8550128	63	·4860106	25	·2109213	201
23	·8461042	69	·4994017	27	·2167329	207
24	·8369504	75	·5126464	29	·2224809	213
25	·8275546	81	·5257412	31	·2281638	219
26	·8179196	87	·5386825	32	·2337801	224
27	·8080490	93	·5514670	34	·2393283	229
28	·7979460	99	·5640914	35	·2448070	234
29	·7876140	105	·5765525	37	·2502150	239
30	·7770554	111	·5888474	39	·2555507	244
May 1	·7662737	117	·6009725	40	·2608128	249
2	·7552719	124	·6129248	42	·2660000	254
3	·7440530	131	·6247019	44	·2711109	259
4	·7326202	138	·6362997	45	·2761441	264
5	·7209770	146	·6477163	46	·2810987	268
6	·7091260	154	·6589483	47	·2859731	272
7	·6970698	162	·6699915	48	·2907655	276
8	·6848133	170	·6808435	49	·2954751	280
9	·6723588	178	·6915008	50	·3001002	284
10	·6597099	187	·7019603	51	·3046394	287
11	·6468697	196	·7122192	51	·3090915	290
12	·6338426	204	·7222740	51	·3134551	293
13	·6206320	213	·7321217	52	·	96
14	·6072426	222	·7417592	52		99
15	·5936778	231	·7511837	51		02
16	·5799421	240	·7603924	51		5
17	·5660397	249	·7693822	50		
18	·5519748	259	·7781507	49		
19	+0·5377523	+269	+0·7866957	− 48		

Mean Noon.	X	Δ X	Y	Δ Y	Z	Δ Z
May 19	+0·5377523	+269	+0·7866957	− 48	+0·3414126	−312
20	·5233764	279	·7950149	47	·3450230	314
21	·5088516	289	·8031062	45	·3485344	316
22	·4941826	299	·8109674	43	·3519461	318
23	·4793743	309	·8185964	41	·3552567	320
24	·4644309	319	·8259916	39	·3584660	321
25	·4493566	329	·8331512	37	·3615732	322
26	·4341561	340	·8400734	34	·3645773	323
27	·4188336	351	·8467572	31	·3674779	324
28	·4033936	362	·8532008	28	·3702742	325
29	·3878412	373	·8594030	25	·3729658	326
30	·3721796	384	·8653626	22	·3755522	326
31	·3564131	395	·8710774	18	·3780324	326
June 1	·3405461	406	·8765468	14	·3804059	326
2	·3245825	416	·8817690	10	·3826723	325
3	·3085270	427	·8867428	6	·3848308	325
4	·2923827	438	·8914672	− 2	·3868810	325
5	·2761550	449	·8959404	+ 2	·3888223	325
6	·2598477	459	·9001612	7	·3906540	324
7	·2434657	470	·9041276	12	·3923753	323
8	·2270132	481	·9078388	18	·3939856	321
9	·2104950	492	·9112936	24	·3954851	319
10	·1939152	503	·9144900	30	·3968723	317
11	·1772793	514	·9174274	37	·3981472	315
12	·1605921	524	·9201052	44	·3993093	313
13	·1438586	535	·9225214	52	·4003579	311
14	·1270839	546	·9246764	60	·4012931	309
15	·1102729	557	·9265692	68	·4021145	306
16	·0934309	567	·9281980	76	·4028215	303
17	·0765629	577	·9295644	84	·4034144	300
18	·0596741	587	·9306672	92	·4038930	296
19	·0427693	597	·9315064	101	·4042572	292
20	·0258537	607	·9320822	110	·4045069	288
21	+ ·0089322	617	·9323944	119	·4046427	284
22	− ·0079897	626	·9324438	128	·4046640	280
23	·0249078	635	·9322306	138	·4045716	276
24	·0418174	644	·9317550	148	·4043652	272
25	·0587140	653	·9310179	158	·4040452	268
26	·0755929	662	·9300190	169	·4036118	263
27	·0924495	670	·9287599	180	·4030654	258
28	·1092792	678	·9272406	191	·4024061	253
29	·1260781	686	·9254614	202	·4016341	248
30	·1428416	694	·9234236	213	·4007496	243
July 1	·1595653	702	·9211268	225	·3997530	237
2	·1762449	709	·9185720	237	·3986442	231
3	·1928757	716	·9157596	249	·3974236	225
4	−0·2094542	+723	+0·9126906	+261	+0·3960918	−219

Mean Noon.	X	Δ X	Y	Δ Y	Z	Δ Z
July 4	−0·2094542	+723	+0·9126906	+261	+0·3960918	−219
5	·2259753	730	·9093650	273	·3946485	213
6	·2424341	736	·9057834	286	·3930943	207
7	·2588262	741	·9019464	299	·3914293	201
8	·2751470	746	·8978552	313	·3896540	195
9	·2913916	751	·8935106	327	·3877684	188
10	·3075557	756	·8889128	341	·3857732	181
11	·3236339	760	·8840634	355	·3836687	174
12	·3396213	764	·8789634	369	·3814554	167
13	·3555135	768	·8736146	384	·3791341	160
14	·3713050	772	·8680182	398	·3767055	152
15	·3869916	776	·8621756	412	·3741701	144
16	·4025676	778	·8560888	426	·3715286	137
17	·4180290	780	·8497594	440	·3687819	129
18	·4333713	781	·8431906	455	·3659311	122
19	·4485898	782	·8363830	470	·3629768	114
20	·4636802	783	·8293392	484	·3599201	106
21	·4786382	784	·8220619	499	·3567619	98
22	·4934592	785	·8145536	514	·3535035	90
23	·5081398	785	·8068160	529	·3501456	81
24	·5226757	785	·7988517	544	·3466893	72
25	·5370636	785	·7906630	560	·3431357	63
26	·5512991	784	·7822524	575	·3394856	54
27	·5653790	783	·7736222	591	·3357404	45
28	·5792991	781	·7647750	606	·3319009	35
29	·5930566	779	·7557130	622	·3279682	25
30	·6066471	777	·7464382	638	·3239432	16
31	·6200669	774	·7369530	653	·3198268	− 7
Aug. 1	·6333127	770	·7272597	668	·3156201	+ 2
2	·6463806	765	·7173605	683	·3113242	11
3	·6592675	759	·7072583	698	·3069401	20
4	·6719688	752	·6969550	712	·3024688	30
5	·6844810	745	·6864535	726	·2979111	40
6	·6968002	738	·6757562	741	·2932688	50
7	·7089225	731	·6648660	755	·2885428	60
8	·7208440	724	·6537856	770	·2837341	70
9	·7325613	717	·6425176	784	·2788440	80
10	·7440700	709	·6310651	798	·2738739	90
11	·7553670	701	·6194326	812	[illegible]	99
12	·7664480	693	·6076220	826	[illegible]	109
13	·7773102	685	·5956374	840	[illegible]	119
14	·7879494	677	·5834825	85[illegible]		129
15	·7983620	667	·5711605	86[illegible]		139
16	·8085456	657	·5586754	8[illegible]		149
17	·8184966	646	·5460313	8[illegible]		159
18	·8282128	634	·5332316	[illegible]		170
19	−0·8376912	+622	+0·5202805	[illegible]		+181

Mean Noon.		X	ΔX	Y	ΔY	Z	ΔZ
Aug.	19	−0·8376912	+622	+0·5202805	+ 918	+0·2257954	+181
	20	·8469286	609	·5071816	931	·2201107	192
	21	·8559228	596	·4939395	944	·2143638	202
	22	·8646716	583	·4805571	956	·2085561	212
	23	·8731726	570	·4670389	968	·2026894	223
	24	·8814236	556	·4533881	980	·1967652	233
	25	·8894222	542	·4396087	991	·1907851	243
	26	·8971668	528	·4257043	1002	·1847508	254
	27	·9046550	514	·4116792	1012	·1786641	264
	28	·9118852	500	·3975361	1022	·1725262	274
	29	·9188542	486	·3832792	1032	·1663389	284
	30	·9255602	470	·3689120	1042	·1601037	294
	31	·9320014	453	·3544385	1052	·1538225	304
Sept.	1	·9381754	436	·3398622	1062	·1474965	314
	2	·9440809	418	·3251870	1072	·1411277	324
	3	·9497149	400	·3104165	1081	·1347175	334
	4	·9550750	382	·2955552	1089	·1282679	344
	5	·9601594	364	·2806073	1097	·1217806	354
	6	·9649667	346	·2655769	1105	·1152576	364
	7	·9694940	328	·2504680	1113	·1087005	374
	8	·9737392	310	·2352849	1121	·1021113	383
	9	·9777017	291	·2200326	1128	·0954919	393
	10	·9813792	272	·2047155	1134	·0888445	402
	11	·9847705	253	·1893386	1140	·0821710	412
	12	·9878740	234	·1739062	1146	·0754736	421
	13	·9906889	214	·1584234	1152	·0687542	430
	14	·9932137	194	·1428949	1157	·0620150	439
	15	·9954475	174	·1273255	1162	·0552580	448
	16	·9973900	154	·1117200	1166	·0484854	457
	17	0·9990410	134	·0960830	1170	·0416991	466
	18	1·0003998	113	·0804193	1174	·0349012	474
	19	1·0014655	91	·0647334	1177	·0280937	483
	20	1·0022388	69	·0490306	1180	·0212788	491
	21	1·0027193	47	·0333149	1183	·0144583	499
	22	1·0029064	25	·0175905	1186	·0076341	507
	23	1·0028009	+ 3	+ ·0018621	1188	+ ·0008081	515
	24	1·0024022	− 19	− ·0138662	1190	− ·0060178	522
	25	1·0017104	41	·0295898	1191	·0128417	529
	26	1·0007265	63	·0453045	1192	·0196617	536
	27	0·9994497	85	·0610060	1193	·0264760	544
	28	·9978800	107	·0766900	1194	·0332827	552
	29	·9960170	130	·0923522	1194	·0400800	559
	30	·9938619	153	·1079881	1193	·0468658	566
Oct.	1	·9914137	176	·1235933	1192	·0536383	573
	2	·9886737	200	·1391638	1191	·0603958	579
	3	·9856417	223	·1546946	1190	·0671360	585
	4	−0·9823170	−247	−0·1701810	+1188	−0·0738569	+591

Mean Noon.	X	ΔX	Y	ΔY	Z	ΔZ
Oct. 4	−0·9823170	− 247	−0·1701810	+1188	−0·0738569	+591
5	·9787014	271	·1856183	1186	·0805566	597
6	·9747947	296	·2010017	1184	·0872328	603
7	·9705972	321	·2163264	1181	·0938836	609
8	·9661100	346	·2315879	1178	·1005069	614
9	·9613342	371	·2467807	1174	·1071004	619
10	·9562702	395	·2619002	1170	·1136621	623
11	·9509209	419	·2769416	1165	·1201900	628
12	·9452862	443	·2918999	1160	·1266817	633
13	·9393687	467	·3067704	1155	·1331353	637
14	·9331694	492	·3215480	1149	·1395487	641
15	·9266902	517	·3362283	1143	·1459197	645
16	·9199339	542	·3508066	1137	·1522466	649
17	·9129022	566	·3652785	1131	·1585272	652
18	·9055974	590	·3796398	1124	·1647598	655
19	·8980216	615	·3938858	1117	·1709425	658
20	·8901776	640	·4080121	1110	·1770730	661
21	·8820676	665	·4220149	1102	·1831501	663
22	·8736938	690	·4358903	1094	·1891718	665
23	·8650588	714	·4496342	1086	·1951365	667
24	·8561650	739	·4632429	1076	·2010426	668
25	·8470144	763	·4767122	1066	·2068880	669
26	·8376102	788	·4900388	1056	·2126716	670
27	·8279544	813	·5032181	1046	·2183913	671
28	·8180494	838	·5162470	1036	·2240456	672
29	·8078976	862	·5291212	1025	·2296328	673
30	·7975015	887	·5418364	1014	·2351510	673
31	·7868642	912	·5543889	1003	·2405986	673
Nov. 1	·7759879	937	·5667754	991	·2459742	672
2	·7648752	962	·5789913	979	·2512757	672
3	·7535295	987	·5910325	966	·2565014	671
4	·7419540	1012	·6028950	953	·2616496	670
5	·7301512	1037	·6145746	939	·2667183	669
6	·7181250	1061	·6260676	925	·2717062	667
7	·7058780	1085	·6373700	911	·2766111	665
8	·6934145	1109	·6484776	896	·2814316	662
9	·6807386	1133	·6593866	881	·2861660	659
10	·6678541	1157	·6700940	865	·2908128	656
11	·6547644	1181	·6805950	849	·2953701	653
12	·6414744	1205	·6908873	833	·2998366	650
13	·6279884	1229	·7009667	81	108	646
14	·6143104	1252	·7108302		915	642
15	·6004450	1275	·7204745		770	638
16	·5863965	1297	·7298970		62	634
17	·5721695	1319	·7390953		0	629
18	·5577684	1341	·7480660		1	624
19	−0·5431983	−1363	−0·7568065	4	4	+619

Mean Noon.	X	Δ X	Y	Δ Y	Z	Δ Z
Nov. 19	−0·5431983	−1363	−0·7568065	+708	−0·3284444	+61
20	·5284630	1385	·7653147	689	·3321367	61
21	·5135667	1407	·7735879	670	·3357272	60
22	·4985139	1429	·7816240	650	·3392147	60
23	·4833088	1450	·7894204	629	·3425981	59
24	·4679561	1471	·7969747	608	·3458766	58
25	·4524600	1492	·8042857	586	·3490495	58
26	·4368247	1512	·8113500	564	·3521151	57
27	·4210548	1532	·8181654	542	·3550729	56
28	·4051546	1552	·8247300	519	·3579217	56
29	·3891286	1572	·8310416	496	·3606608	55
30	·3729818	1592	·8370972	472	·3632890	54
Dec. 1	·3567180	1612	·8428956	448	·3658053	53
2	·3403427	1632	·8484340	424	·3682088	52
3	·3238608	1651	·8537106	399	·3704987	51
4	·3072772	1669	·8587228	374	·3726740	50
5	·2905970	1686	·8634690	348	·3747336	50
6	·2738254	1703	·8679472	322	·3766772	49
7	·2569676	1720	·8721556	296	·3785035	47
8	·2400291	1736	·8760924	270	·3802120	46
9	·2230156	1752	·8797564	244	·3818020	45
10	·2059329	1768	·8831462	218	·3832731	44
11	·1887863	1784	·8862610	190	·3846247	43
12	·1715817	1799	·8890992	162	·3858564	42
13	·1543251	1813	·8916598	133	·3869678	41
14	·1370215	1826	·8939424	104	·3879584	40
15	·1196768	1839	·8959474	75	·3888284	38
16	·1022963	1852	·8976732	46	·3895774	37
17	·0848855	1865	·8991198	+ 16	·3902053	36
18	·0674498	1877	·9002872	− 15	·3907120	35
19	·0499951	1888	·9011754	46	·3910974	33
20	·0325259	1898	·9017844	77	·3913617	32
21	− ·0150478	1908	·9021140	107	·3915048	31
22	+ ·0024344	1918	·9021642	138	·3915265	30
23	·0199153	1927	·9019348	170	·3914270	28
24	·0373899	1935	·9014264	201	·3912064	27
25	·0548532	1942	·9006392	232	·3908648	25
26	·0722999	1949	·8995730	263	·3904022	24
27	·0897252	1956	·8982282	294	·3898184	23
28	·1071236	1962	·8966044	327	·3891137	21
29	·1244900	1967	·8947022	360	·3882883	20
30	·1418192	1971	·8925214	393	·3873420	18
31	·1591063	1974	·8900630	426	·3862751	17
32	+0·1763455	−1977	−0·8873276	−460	−0·3850880	+15

EPHEMERIS

OF

THE PLANETS.

JANUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	17 56 48·26	S. 24 11 34·0	0·1420339	23 17·2	244 46 52·9	S. 2 11 46·6	9·667218
2	18 3 32·82	24 17 47·9	·1440549	23 20·1	247 32 17·2	2 30 53·4	·668068
3	18 10 19·56	24 22 45·9	·1458985	23 23·0	250 17 13·9	2 49 35·7	·668648
4	18 17 8·39	24 26 26·1	·1475683	23 25·9	253 1 55·4	3 7 52·4	·668968
5	18 23 59·19	24 28 47·5	·1490674	23 28·8	255 46 34·0	3 25 42·3	·669028
6	18 30 51·86	24 29 48·8	·1503980	23 31·8	258 31 22·0	3 43 4·2	·668818
7	18 37 46·27	24 29 28·5	·1515617	23 34·8	261 16 31·5	3 59 57·0	·668358
8	18 44 42·33	24 27 45·8	·1525600	23 37·8	264 2 14·9	4 16 19·3	·667678
9	18 51 39·93	24 24 39·5	·1533939	23 40·8	266 48 44·5	4 32 9·7	·666628
10	18 58 38·95	24 20 8·2	·1540631	23 43·9	269 36 12·8	4 47 26·5	·665418
11	19 5 39·30	24 14 11·1	·1545679	23 47·0	272 24 52·2	5 2 8·0	·663888
12	19 12 40·85	24 6 47·6	·1549070	23 50·1	275 14 56·0	5 16 12·2	·662118
13	19 19 43·49	23 57 56·2	·1550793	23 53·2	278 6 37·1	5 29 37·0	·660068
14	19 26 47·12	23 47 36·3	·1550826	23 56·4	281 0 9·1	5 42 20·0	·657768
15	19 33 51·62	23 35 46·9	·1549143	23 59·5	283 55 46·2	5 54 18·8	·655218
16	19 40 56·88	23 22 27·3	·1545717	* *	286 53 42·6	6 5 30·5	·652398
17	19 48 2·76	23 7 36·8	·1540503	0 2·7	289 54 12·9	6 15 51·9	·649268
18	19 55 9·17	22 51 14·7	·1533458	0 5·8	292 57 32·7	6 25 19·4	·645938
19	20 2 15·97	22 33 20·4	·1524528	0 9·0	296 3 58·1	6 33 49·3	·642258
20	20 9 23·07	22 13 53·4	·1513661	0 12·2	299 13 45·8	6 41 17·5	·638358
21	20 16 30·29	21 52 53·1	·1500779	0 15·4	302 27 13·0	6 47 39·3	·634158
22	20 23 37·51	21 30 19·5	·1485806	0 18·6	305 44 37·4	6 52 49·6	·629758
23	20 30 44·58	21 6 12·1	·1468659	0 21·8	309 6 17·8	6 56 43·0	·625078
24	20 37 51·35	20 40 31·0	·1449243	0 24·9	312 32 33·4	6 59 13·6	·620018
25	20 44 57·64	20 13 16·1	·1427443	0 28·1	316 3 44·7	7 0 14·9	·614818
26	20 52 3·27	19 44 27·8	·1403146	0 31·3	319 40 12·2	6 59 40·0	·609338
27	20 59 8·03	19 14 6·6	·1376222	0 34·4	323 22 17·1	6 57 21·5	·603618
28	21 6 11·70	18 42 13·0	·1346525	0 37·5	327 10 21·7	6 53 11·6	·597748
29	21 13 14·00	18 8 48·3	·1313903	0 40·6	331 4 48·1	6 47 1·9	·591518
30	21 20 14·65	17 33 53·8	·1278181	0 43·7	335 5 59·0	6 38 44·1	·585218
31	21 27 13·29	16 57 31·3	·1239180	0 46·8	339 14 16·6	6 28 9·5	·578618
32	21 34 9·54	S. 16 19 43·1	0·1196700	0 49·8	343 30 3·3	S. 6 15 9·2	9·571918

JANUARY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
18 3 20·77	+16·93	0·17	S. 24 17 37·9	−14·1	2·3	6·2
18 10 8·26	17·02	0·17	24 22 38·7	10·9	2·3	6·1
18 16 57·85	17·11	0·17	24 26 21·3	7·6	2·3	6·1
18 23 49·43	17·19	0·17	24 28 45·0	4·3	2·3	6·1
18 30 42·89	17·27	0·17	24 29 48·4	− 0·9	2·3	6·1
18 37 38·13	17·34	0·17	24 29 29·7	+ 2·5	2·3	6·1
18 44 35·03	17·40	0·17	24 27 48·4	6·0	2·3	6·0
18 51 33·48	17·47	0·17	24 24 43·1	9·5	2·3	6·0
18 58 33·37	17·52	0·17	24 20 12·4	13·1	2·3	6·0
19 5 34·59	17·58	0·17	24 14 15·6	16·7	2·3	6·0
19 12 37·04	17·63	0·17	24 6 52·0	20·3	2·3	6·0
19 19 40·58	17·67	0·17	23 58 0·2	24·0	2·3	6·0
19 26 45·12	17·71	0·17	23 47 39·4	27·7	2·3	6·0
19 33 50·55	17·74	0·17	23 35 48·8	31·5	2·3	6·0
19 40 56·74	17·77	0·17	23 22 27·6	35·3	2·3	6·0
19 48 3·56	17·80	0·17	23 7 35·1	39·1	2·3	6·0
19 55 10·91	17·82	0·17	22 51 10·5	42·9	2·3	6·0
20 2 18·65	17·83	0·17	22 33 13·4	46·8	2·3	6·0
* * *	*	*	* * *	*	*	*
20 9 26·69	17·84	0·17	22 13 43·1	50·7	2·3	6·1
20 16 34·86	17·84	0·17	21 52 39·1	54·6	2·3	6·1
20 23 43·02	17·84	0·17	21 30 1·4	58·5	2·3	6·1
20 30 51·03	17·83	0·16	21 5 49·5	62·5	2·3	6·1
20 37 58·73	17·81	0·16	20 40 3·5	66·4	2·3	6·1
20 45 5·96	17·79	0·16	20 12 43·1		·3	6·2
20 52 12·50	17·76	0·16	19 43		·	6·2
20 59 18·16	17·72	0·17	19 1		·	6·3
21 6 22·73	17·66	0·17			·4	6·3
21 13 25·89	17·60	0·17			·	6·4
21 20 27·39	17·52	0·17				6·4
21 27 26·84	17·43	0·18				6·5
21 34 23·87	+17·32	0·18				6·5

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vec.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 34 9·54	S. 16 19 43·1	0·1196700	0 49·8	343 30 3·3	S. 6 15 9·2	9·5719
2	21 41 2·93	15 40 32·4	·1150531	0 52·7	347 53 40·1	5 59 35·0	·5651
3	21 47 52·96	15 0 2·4	·1100458	0 55·6	352 25 27·6	5 41 19·0	·5582
4	21 54 39·00	14 18 18·0	·1046242	0 58·4	357 5 44·0	5 20 14·5	·5513
5	22 1 20·35	13 35 24·3	·0987641	1 1·2	1 54 45·4	4 56 15·9	·5444
6	22 7 56·18	12 51 27·9	·0924416	1 3·8	6 52 43·7	4 29 20·2	·5375
7	22 14 25·58	12 6 36·3	·0856328	1 6·4	11 59 47·4	3 59 26·5	·5308
8	22 20 47·46	11 20 58·8	·0783135	1 8·8	17 15 58·5	3 26 38·1	·5242
9	22 27 0·63	10 34 45·9	·0704623	1 11·1	22 41 13·9	2 51 1·8	·5180
10	22 33 3·69	9 48 9·6	·0620594	1 13·2	28 15 21·6	2 12 49·6	·5121
11	22 38 55·12	9 1 23·9	·0530894	1 15·1	33 58 1·8	1 32 18·8	·5066
12	22 44 33·23	8 14 44·6	·0435415	1 16·8	39 48 44·2	0 49 52·6	·5015
13	22 49 56·18	7 28 29·0	·0334113	1 18·2	45 46 49·4	S. 0 6 0·1	·4977
14	22 55 1·99	6 42 56·2	·0227025	1 19·3	51 51 26·5	N. 0 38 44·5	·4939
15	22 59 48·55	5 58 27·3	0·0114285	1 20·1	58 1 34·4	1 23 41·8	·4911
16	23 4 13·71	5 15 23·9	9·9996137	1 20·6	64 16 1·7	2 8 9·8	·4899
17	23 8 15·25	4 34 9·7	·9872948	1 20·7	70 33 29·1	2 51 24·3	·4886
18	23 11 50·95	3 55 8·4	·9745221	1 20·3	76 52 30·9	3 32 42·2	·4873
19	23 14 58·73	3 18 44·2	·9613600	1 19·4	83 11 37·4	4 11 22·4	·4888
20	23 17 36·62	2 45 21·0	·9478876	1 18·1	89 29 17·9	4 46 48·9	·4902
21	23 19 42·89	2 15 22·1	·9341987	1 16·2	95 44 3·1	5 18 31·6	·4921
22	23 21 16·09	1 49 9·6	·9204013	1 13·8	101 54 28·6	5 46 7·9	·4955
23	23 22 15·25	1 27 3·1	·9066173	1 10·8	107 59 17·2	6 9 23·1	·4999
24	23 22 39·74	1 9 20·5	·8929795	1 7·3	113 57 21·2	6 28 10·4	·5047
25	23 22 29·65	0 56 15·6	·8796299	1 3·2	119 47 43·8	6 42 30·0	·5098
26	23 21 45·50	0 47 58·7	·8667178	0 58·5	125 29 40·0	6 52 29·0	·5151
27	23 20 28·64	0 44 35·5	·8543964	0 53·2	131 2 35·2	6 58 18·9	·5211
28	23 18 41·05	0 46 5·9	·8428168	0 47·5	136 26 6·7	7 0 16·0	·5281
29	23 16 25·47	S. 0 52 24·1	9·8321251	0 41·3	141 40 1·2	N. 6 58 38·3	9·5349

FEBRUARY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	21 34 23·87	+17·32	0·18	S. 16 18 23·3	+ 96·6	2·5	6·5
2	21 41 18·00	17·19	0·18	15 39 4·8	100·0	2·5	6·6
3	21 48 8·72	17·03	0·18	14 58 27·0	103·2	2·5	6·7
4	21 54 55·39	16·85	0·18	14 16 34·9	106·2	2·5	6·7
5	22 1 37·29	16·64	0·18	13 33 33·5	108·9	2·6	6·8
6	22 8 13·59	16·38	0·18	12 49 29·7	111·4	2·6	6·9
7	22 14 43·36	16·09	0·18	12 4 31·0	113·5	2·7	7·1
8	22 21 5·50	15·75	0·18	11 18 46·9	115·1	2·7	7·2
9	22 27 18·80	15·35	0·18	10 32 28·3	116·3	2·8	7·3
10	22 33 21·85	14·89	0·18	9 45 47·1	117·0	2·8	7·4
11	22 39 13·10	14·37	0·19	8 58 57·6	117·0	2·9	7·6
12	22 44 50·85	13·77	0·19	8 12 15·9	116·3	2·9	7·8
13	22 50 13·24	13·09	0·20	7 25 59·3	114·9	3·0	8·0
14	22 55 18·30	12·32	0·21	6 40 27·1	112·6	3·1	8·2
15	23 0 3·90	11·47	0·21	5 56 0·9	109·4	3·2	8·4
16	23 4 27·89	10·52	0·22	5 13 2·2	105·3	3·3	8·6
17	23 8 28·05	9·48	0·22	4 31 54·6	100·2	3·4	8·9
18	23 12 2·18	8·35	0·22	3 53 2·1	94·0	3·4	9·1
19	23 15 8·24	7·14	0·23	3 16 48·7	86·9	3·5	9·4
20	23 17 44·28	5·85	0·24	2 43 37·9	78·8	3·7	9·7
21	23 19 48·66	4·50	0·25	2 13 52·9	69·8	3·8	10·1
22	23 21 19·95	3·10	0·26	1 47 55·4	59·9	4·0	10·5
23	23 22 17·27	1·67	0·27	1 26 4·4	49·2	4·1	10·8
24	23 22 40·03	+ 0·23	0·28	1 8 37·5	37·9	4·2	11·0
25	23 22 28·41	− 1·19	0·29	0 55 47·7	26·2	4	·3
26	23 21 43·00	2·58	0·29	0 47 44·7	14·1		7
27	23 20 25·18	3·89	0·30	0 44 33·7	+ 1·9		
28	23 18 36·99	5·10	0·30	0 46 13·9	− 10·2		
29	23 16 21·18	− 6·19	0·32	S. 0 52 39·2	−		

MARCH, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	23 16 25·47	S. 0 52 24·1	9·8321251	0 41·3	141 40 1·2	N. 6 58 38·3	9·5347560
2	23 13 45·31	1 3 18·0	·8224551	0 34·7	146 44 15·9	6 53 45·9	·5415731
3	23 10 44·59	1 18 29·3	·8139247	0 27·8	151 38 54·0	6 45 58·9	·5484825
4	23 7 27·83	1 37 33·7	·8066297	0 20·6	156 24 6·6	6 35 37·8	·5554221
5	23 3 59·92	2 0 0·8	·8006406	0 13·3	161 0 8·4	6 23 2·0	·5623405
6	23 0 25·90	2 25 16·8	·7959992	{0 / 58 / 53}	165 27 19·2	6 8 29·8	·5691911
7	22 56 50·82	2 52 44·6	·7927174	23 50·9	169 46 0·6	5 52 18·2	·5759347
8	22 53 19·51	3 21 45·7	·7907762	23 43·6	173 56 37·0	5 34 42·5	·5825384
9	22 49 56·47	3 51 41·8	·7901323	23 36·5	177 59 33·5	5 15 56·9	·5889749
10	22 46 45·67	4 21 56·5	·7907170	23 29·7	181 55 15·8	4 56 13·5	·5952190
11	22 43 50·59	4 51 55·8	·7924439	23 23·1	185 44 9·8	4 35 43·5	·6012548
12	22 41 13·97	5 21 9·7	·7952125	23 16·9	189 26 41·3	4 14 36·5	·6070648
13	22 38 57·95	5 49 12·2	·7989159	23 11·1	193 3 15·2	3 53 1·1	·6126381
14	22 37 4·06	6 15 42·2	·8034428	23 5·7	196 34 16·1	3 31 4·6	·6179607
15	22 35 33·29	6 40 22·5	·8086831	23 0·6	200 0 7·7	3 8 53·3	·6230317
16	22 34 26·14	7 2 59·7	·8145314	22 56·0	203 21 12·7	2 46 32·8	·6278515
17	22 33 42·63	7 23 24·4	·8208876	22 51·7	206 37 52·8	2 24 7·7	·6324021
18	22 33 22·51	7 41 30·6	·8276596	22 47·7	209 50 28·9	2 1 42·3	·6366811
19	22 33 25·23	7 57 14·1	·8347655	22 44·2	212 59 20·8	1 39 20·2	·6407021
20	22 33 50·02	8 10 33·2	·8421319	22 41·0	216 4 47·8	1 17 4·3	·6444587
21	22 34 36·01	8 21 27·9	·8496946	22 38·2	219 7 8·0	0 54 57·3	·6479351
22	22 35 42·23	8 29 59·2	·8573975	22 35·7	222 6 38·9	0 33 1·5	·6511401
23	22 37 7·61	8 36 9·4	·8651927	22 33·5	225 3 36·9	N. 0 11 19·0	·6540911
24	22 38 51·10	8 40 1·1	·8730387	22 31·5	227 58 17·8	S. 0 10 8·5	·6567611
25	22 40 51·65	8 41 37·7	·8809026	22 29·8	230 50 57·1	0 31 19·5	·6591711
26	22 43 8·21	8 41 2·6	·8887546	22 28·3	233 41 49·5	0 52 12·7	·6613211
27	22 45 39·81	8 38 19·7	·8965719	22 27·1	236 31 9·4	1 12 46·7	·6632011
28	22 48 25·47	8 33 32·2	·9043353	22 26·2	239 19 10·4	1 33 0·4	·6648111
29	22 51 24·32	8 26 44·7	·9120286	22 25·4	242 6 5·9	1 52 52·6	·6661611
30	22 54 35·47	8 18 0·1	·9196397	22 24·8	244 52 8·8	2 12 22·2	·6672611
31	22 57 58·17	8 7 22·4	·9271588	22 24·4	247 37 31·9	2 31 28·4	·6680911
32	23 1 31·67	S. 7 54 54·8	9·9345780	22 24·2	250 22 28·0	S. 2 50 9·8	9·6686611

MARCH, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	23 16 21·18	— 6·19	0·32	S. 0 52 39·2	—21·8	4·8	12·6
2	23 13 41·16	7·12	0·33	1 3 37·1	32·9	4·9	12·9
3	23 10 40·92	7·87	0·33	1 18 49·4	43·0	5·0	13·2
4	23 7 24·91	8·43	0·34	1 37 51·7	52·0	5·1	13·4
5	{23 3 57·97 / 23 0 35·04}	{8·78 / 8·93}	{0·34 / 0·35}	{2 0 14·2 / 2 25 23·3}	{59·6 / 65·8}	{5·1 / 5·2}	{13·6 / 13·7}
6	22 56 51·08	8·87	0·35	2 52 42·7	70·5	5·2	13·8
7	22 53 20·83	8·62	0·35	3 21 34·5	73·6	5·2	13·9
8	22 49 58·74	8·20	0·35	3 51 21·1	75·1	5·2	13·9
9	22 46 48·68	7·62	0·35	4 21 26·8	75·2	5·2	13·9
10	22 43 54·11	6·91	0·35	4 51 18·2	73·9	5·2	13·8
11	22 41 17·74	6·10	0·35	5 20 25·4	71·5	5·2	13·8
12	22 39 1·71	5·22	0·35	5 48 23·1	68·1	5·2	13·7
13	22 37 7·56	4·28	0·34	6 14 50·0	64·0	5·1	13·5
14	22 35 36·30	3·32	0·34	6 39 28·8	59·2	5·0	13·3
15	22 34 28·44	2·34	0·34	7 2 6·3	53·9	5·0	13·2
16	22 33 44·07	1·36	0·33	7 22 32·8	48·3	4·9	13·0
17	22 33 22·93	— 0·40	0·32	7 40 42·3	42·5	4·8	12·8
18	22 33 24·55	+ 0·53	0·32	7 56 30·2	36·5	4·8	12·6
19	22 33 48·17	1·43	0·31	8 9 54·8	30·5	4·7	12·4
20	22 34 32·95	2·29	0·31	8 20 55·7	24·6	4·6	12·1
21	22 35 37·94	3·11	0·30	8 29 33·9	18·7	4·5	11·9
22	22 37 2·09	3·89	0·29	8 35 51·5	12·9	4·4	11·7
23	22 38 44·37	4·62	0·29	8 39 51·1	7·2	4·3	11·5
24	22 40 43·74	5·32	0·29	8 41 35·7	— 1·6	4·3	11·3
25	22 42 59·17	5·96	0·28	8 41 8·6	+ 3·8	4·2	11·1
26	22 45 29·71	6·57	0·27	8 38 33·9			10·9
27	22 48 14·37	7·14	0·26	8 33 54·[illegible]			
28	22 51 12·27	7·68	0·26	8			
29	22 54 22·54	8·18	0·26	8			
30	22 57 44·43	8·64	0·25				
31	23 1 17·18	9·08	0·25				
32	23 5 0·12	+ 9·49	0·25	S			

APRIL, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	23 1 31·67	S. 7 54 54·8	9·9345780	22 24·2	250 22 28·0	S. 2 50 9·8	9
2	23 5 15·31	7 40 40·8	·9418916	22 24·1	253 7 9·5	3 8 25·6	
3	23 9 8·46	7 24 43·4	·9490957	22 24·1	255 51 48·5	3 26 14·7	
4	23 13 10·58	7 7 6·0	·9561869	22 24·4	258 36 37·3	3 43 35·9	
5	23 17 21·15	6 47 51·3	·9631628	22 24·8	261 21 48·0	4 0 27·9	
6	23 21 39·71	6 27 2·1	·9700229	22 25·3	264 7 32·8	4 16 49·2	
7	23 26 5·86	6 4 41·0	·9767660	22 25·9	266 54 4·1	4 32 38·5	
8	23 30 39·20	5 40 51·0	·9833916	22 26·6	269 41 34·3	4 47 54·3	
9	23 35 19·45	5 15 34·0	·9899006	22 27·5	272 30 15·9	5 2 34·8	
10	23 40 6·31	4 48 52·6	9·9962930	22 28·4	275 20 22·6	5 16 37·7	
11	23 44 59·55	4 20 49·1	0·0025694	22 29·4	278 12 7·2	5 30 1·3	
12	23 49 58·96	3 51 25·8	·0087301	22 30·6	281 5 43·2	5 42 43·1	
13	23 55 4·36	3 20 44·6	·0147754	22 31·8	284 1 24·2	5 54 40·5	
14	0 0 15·65	2 48 48·0	·0207060	22 33·1	286 59 24·9	6 5 50·6	
15	0 5 32·70	2 15 37·5	·0265218	22 34·6	290 0 0·4	6 16 10·3	
16	0 10 55·47	1 41 15·6	·0322223	22 36·1	293 3 25·8	6 25 36·2	
17	0 16 23·92	1 5 44·0	·0378071	22 37·7	296 9 57·3	6 34 4·3	
18	0 21 58·04	S. 0 29 4·5	·0432749	22 39·5	299 19 51·3	6 41 30·4	
19	0 27 37·87	N. 0 8 40·4	·0486241	22 41·3	302 33 25·3	6 47 50·0	
20	0 33 23·44	0 47 29·1	·0538534	22 43·2	305 50 57·1	6 52 58·1	
21	0 39 14·85	1 27 19·5	·0589593	22 45·2	309 12 45·6	6 56 49·1	
22	0 45 12·21	2 8 9·4	·0639384	22 47·3	312 39 10·1	6 59 17·0	
23	0 51 15·64	2 49 56·7	·0687867	22 49·5	316 10 30·8	7 0 15·4	
24	0 57 25·30	3 32 38·9	·0734987	22 51·8	319 47 8·3	6 59 37·4	
25	1 3 41·38	4 16 13·8	·0780686	22 54·3	323 29 24·0	6 57 15·6	
26	1 10 4·06	5 0 38·5	·0824882	22 56·8	327 17 39·9	6 53 2·1	
27	1 16 33·55	5 45 50·1	·0867503	22 59·5	331 12 18·2	6 46 48·7	
28	1 23 10·10	6 31 45·6	·0908448	23 2·3	335 13 41·7	6 38 26·7	
29	1 29 53·96	7 18 21·4	·0947610	23 5·2	339 22 12·7	6 27 47·6	
30	1 36 45·35	8 5 33·8	·0984861	23 8·2	343 38 13·5	6 14 42·7	
31	1 43 44·53	N. 8 53 18·3	0·1020066	23 11·4	348 2 5·0	S. 5 59 3·7	9

APRIL, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
23 5 0·12	+ 9·49	0·25	S. 7 41 40·8	+ 37·5	3·7	9·8
23 8 52·65	9·88	0·25	7 25 50·2	41·7	3·7	9·8
23 12 54·20	10·25	0·25	7 8 19·4	45·8	3·7	9·7
23 17 4·26	10·59	0·24	6 49 10·9	49·8	3·6	9·6
23 21 22·38	10·92	0·23	6 28 27·6	53·7	3·5	9·4
23 25 48·13	11·23	0·22	6 6 12·0	57·5	3·4	9·1
23 30 21·12	11·52	0·22	5 42 27·2	61·2	3·4	8·9
23 35 1·07	11·81	0·22	5 17 15·0	64·8	3·3	8·8
23 39 47·67	12·08	0·22	4 50 38·0	68·3	3·3	8·7
23 44 40·70	12·34	0·22	4 22 38·6	71·7	3·2	8·5
23 49 39·94	12·60	0·22	3 53 19·1	75·0	3·2	8·4
23 54 45·22	12·84	0·21	3 22 41·3	78·2	3·1	8·3
23 59 56·42	13·09	0·21	2 50 47·5	81·3	3·1	8·2
0 5 13·42	13·33	0·21	2 17 39·6	84·3	3·1	8·1
0 10 36·16	13·57	0·21	1 43 19·9	87·3	3·0	8·0
0 16 4·62	13·81	0·20	1 7 50·1	90·2	3·0	7·9
0 21 38·80	14·04	0·19	S. 0 31 12·0	93·0	2·9	7·8
0 27 18·71	14·28	0·19	N. 0 6 32·0	95·7	2·9	7·7
0 33 4·39	14·53	0·19	0 45 20·2	98·3	2·9	7·6
0 38 55·95	14·77	0·18	1 25 10·5	100·9	2·8	7·5
0 44 53·49	15·02	0·18	2 6 0·6	103·3	2·8	7·4
0 50 57·14	15·28	0·18	2 47 48·7	105·7	2·8	7·3
0 57 7·05	15·55	0·18	3 30 32·2	107·9	2·8	7·3
1 3 23·42	15·82	0·18	4 14 8·9	110·1	2·7	7·2
1 9 46·44	16·10	0·18	4 58 35·8	112·1	2·7	7·1
1 16 16·32	16·39	0·18	5 43 50·2	114·0	2·6	7·0
1 22 53·30	16·69	0·18	6 29 48·9	115·8	2·6	7·0
1 29 37·63	17·00	0·17	7 16 28·5	117·4		6·9
1 36 29·55	17·32	0·17	8 3 45·4	118·9		6·8
1 43 29·32	17·66	0·17	8 51 34·9	120·2		·8
1 50 37·19	+18·00	0·17	N. 9 39 52·2	+		

MAY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	1 43 44·53	N. 8 53 18·3	0·1020066	23 11·4	348 2 5·0	S. 5 59 3·7
2	1 50 51·73	9 41 30·1	·1053076	23 14·7	352 34 7·9	5 40 42·5
3	1 58 7·20	10 30 3·9	·1083711	23 18·2	357 14 40·0	5 19 32·7
4	2 5 31·13	11 18 53·9	·1111801	23 21·8	2 3 57·6	4 55 28·7
5	2 13 3·69	12 7 52·9	·1137145	23 25·5	7 2 12·3	4 28 27·6
6	2 20 44·99	12 56 53·6	·1159538	23 29·4	12 9 32·5	3 58 28·5
7	2 28 35·08	13 45 47·8	·1178753	23 33·5	17 26 0·1	3 25 34·9
8	2 36 33·96	14 34 26·2	·1194570	23 37·7	22 51 31·7	2 49 53·5
9	2 44 41·48	15 22 39·1	·1206757	23 42·0	28 25 55·2	2 11 36·8
10	2 52 57·45	16 10 15·7	·1215087	23 46·5	34 8 50·7	1 31 2·1
11	3 1 21·52	16 57 4·4	·1219338	23 51·1	39 59 47·5	0 48 32·8
12	3 9 53·21	17 42 53·7	·1219308	23 55·8	45 58 5·6	S. 0 4 38·1
13	3 18 31·81	18 27 30·3	·1214810	* *	52 2 53·3	N. 0 40 7·4
14	3 27 16·65	19 10 42·3	·1205696	0 0·6	58 13 9·7	1 25 4·4
15	3 36 6·75	19 52 17·3	·1191842	0 5·5	64 27 43·7	2 9 30·8
16	3 45 1·15	20 32 3·2	·1173177	0 10·5	70 45 15·7	2 52 42·4
17	3 53 58·61	21 9 48·7	·1149664	0 15·5	77 4 19·4	3 33 56·1
18	4 2 57·91	21 45 23·5	·1121319	0 20·6	83 23 24·8	4 12 30·9
19	4 11 57·76	22 18 38·7	·1088215	0 25·7	89 41 0·8	4 47 50·9
20	4 20 56·81	22 49 26·6	·1050448	0 30·8	95 55 38·8	5 19 26·3
21	4 29 53·74	23 17 41·5	·1008172	0 35·8	102 5 55·1	5 46 54·8
22	4 38 47·26	23 43 19·3	·0961572	0 40·7	108 10 32·5	6 10 1·7
23	4 47 36·06	24 6 17·2	·0910852	0 45·6	114 8 23·5	6 28 40·7
24	4 56 19·00	24 26 34·5	·0856244	0 50·4	119 58 31·3	6 42 52·2
25	5 4 54·97	24 44 11·6	·0797991	0 55·1	125 40 11·2	6 52 43·4
26	5 13 22·97	24 59 10·5	·0736342	0 59·6	131 12 49·2	6 58 26·0
27	5 21 42·09	25 11 34·2	·0671537	1 4·0	136 36 3·6	7 0 16·2
28	5 29 51·51	25 21 26·8	·0603826	1 8·2	141 49 40·5	6 58 32·2
29	5 37 50·50	25 28 52·9	·0533449	1 12·3	146 53 37·2	6 53 34·1
30	5 45 38·45	25 33 58·4	·0460622	1 16·1	151 47 58·2	6 45 42·1
31	5 53 14·78	25 36 48·9	·0385557	1 19·8	156 32 53·8	6 35 16·6
32	6 0 39·01	N. 25 37 30·7	0·0308460	1 23·2	161 8 39·1	N. 6 22 36·9

MAY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	1 50 37·19	+18·00	0·17	N. 9 39 52·2	+121·2	2·5	6·7
2	1 57 53·38	18·35	0·17	10 28 32·0	122·1	2·5	6·7
3	2 5 18·12	18·71	0·17	11 17 28·6	122·6	2·5	6·6
4	2 12 51·58	19·08	0·17	12 6 34·8	122·9	2·5	6·6
5	2 20 33·86	19·45	0·18	12 55 43·2	122·8	2·5	6·6
6	2 28 25·02	19·82	0·18	13 44 45·7	122·3	2·5	6·5
7	2 36 25·07	20·19	0·18	14 33 32·7	121·5	2·5	6·5
8	2 44 33·86	20·55	0·18	15 21 54·5	120·2	2·5	6·5
9	2 52 51·21	20·90	0·18	16 9 40·3	118·5	2·5	6·5
10	3 1 16·76	21·23	0·18	16 56 38·3	116·3	2·5	6·5
11	3 9 50·03	21·54	0·18	17 42 36·8	113·5	2·5	6·5
12	3 18 30·29	21·82	0·18	18 27 22·6	110·2	2·5	6·5
13	* * *	*	*	* * *	*	*	*
14	3 27 16·87	22·06	0·18	19 10 43·4	106·4	2·5	6·5
15	3 36 8·79	22·26	0·18	19 52 26·7	102·1	2·5	6·5
16	3 45 5·07	22·42	0·18	20 32 20·3	97·3	2·5	6·6
17	3 54 4·43	22·52	0·18	21 10 12·5	92·0	2·5	6·6
18	4 3 5·64	22·57	0·18	21 45 53·1	86·3	2·5	6·6
19	4 12 7·39	22·57	0·18	22 19 13·0	80·3	2·5	6·7
20	4 21 8·31	22·50	0·18	22 50 4·4	74·0	2·5	6·7
21	4 30 7·04	22·38	0·19	23 18 21·6	67·4	2·6	6·8
22	4 39 2·28	22·21	0·19	23 44 0·5	60·8	2·6	6·9
23	4 47 52·72	21·99	0·20	24 6 58·1	54·0	2·6	7·0
24	4 56 37·18	21·71	0·20	24 27 14·1	47·3	2·6	
25	5 5 14·55	21·39	0·20	24 44 48·7	40·6	2·	
26	5 13 43·82	21·04	0·20	24 59 44·3	34·0		
27	5 22 4·06	20·64	0·20	25 12 3·6	2[illegible]		
28	5 30 14·44	20·22	0·21	25 21 51·1			
29	5 38 14·25	19·76	0·21	25 29 11·5			
30	5 46 2·86	19·28	0·21	25 34 10·7			
31	5 53 39·70	18·78	0·22	25 36 54·5			
32	6 1 4·30	+18·26	0·22	N.25 37 29·2			

JUNE, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	6 0 39·01	N.25 37 30·7	0·0308460	1 23·2	161 8 39·1	N.6 22 36·9	9
2	6 7 50·72	25 36 10·7	·0229504	1 26·5	165 35 34·0	6 8 1·6	
3	6 14 49·50	25 32 55·1	·0148870	1 29·5	169 54 0·3	5 51 47·0	
4	6 21 35·05	25 27 51·2	0·0066720	1 32·3	174 4 22·3	5 34 9·0	
5	6 28 7·03	25 21 5·4	9·9983195	1 34·9	178 7 5·1	5 15 21·3	
6	6 34 25·17	25 12 44·9	·9898436	1 37·2	182 2 34·7	4 55 36·3	
7	6 40 29·20	25 2 56·2	·9812571	1 39·3	185 51 16·7	4 35 5·1	
8	6 46 18·88	24 51 46·0	·9725728	1 41·2	189 33 36·9	4 13 57·1	
9	6 51 53·93	24 39 21·0	·9638025	1 42·8	193 10 0·5	3 52 20·9	
10	6 57 14·15	24 25 47·8	·9549571	1 44·2	196 40 51·8	3 30 23·8	
11	7 2 19·27	24 11 12·6	·9460486	1 45·3	200 6 34·4	3 8 12·1	
12	7 7 9·02	23 55 42·2	·9370886	1 46·2	203 27 30·9	2 45 51·2	
13	7 11 43·15	23 39 22·7	·9280883	1 46·8	206 44 3·3	2 23 26·2	
14	7 16 1·39	23 22 20·2	·9190606	1 47·1	209 56 32·3	2 1 0·8	
15	7 20 3·43	23 4 41·4	·9100184	1 47·2	213 5 18·0	1 38 38·8	
16	7 23 48·99	22 46 31·9	·9009749	1 47·0	216 10 39·1	1 16 23·1	
17	7 27 17·75	22 27 58·3	·8919462	1 46·6	219 12 54·0	0 54 16·5	
18	7 30 29·40	22 9 6·5	·8829484	1 45·8	222 12 19·9	0 32 21·1	
19	7 33 23·60	21 50 2·7	·8740002	1 44·7	225 9 13·4	N.0 10 39·1	
20	7 36 0·02	21 30 53·1	·8651214	1 43·4	228 3 50·5	S.0 10 48·0	
21	7 38 18·31	21 11 43·8	·8563342	1 41·7	230 56 26·5	0 31 58·5	
22	7 40 18·19	20 52 40·6	·8476639	1 39·7	233 47 15·9	0 52 51·1	
23	7 41 59·34	20 33 50·2	·8391380	1 37·5	236 36 33·0	1 13 24·5	
24	7 43 21·51	20 15 18·3	·8307864	1 34·9	239 24 31·7	1 33 37·5	
25	7 44 24·46	19 57 11·2	·8226429	1 31·9	242 11 25·2	1 53 29·0	
26	7 45 8·05	19 39 34·9	·8147442	1 28·7	244 57 26·7	2 12 57·9	
27	7 45 32·20	19 22 35·7	·8071304	1 25·2	247 42 48·8	2 32 3·2	
28	7 45 36·89	19 6 19·5	·7998441	1 21·3	250 27 44·4	2 50 43·9	
29	7 45 22 30	18 50 51·6	·7929319	1 17·1	253 12 25·6	3 8 59·0	
30	7 44 48·70	18 36 18·2	·7864431	1 12·6	255 57 4·6	3 26 47·3	
31	7 43 56·55	N.18 22 44·4	9·7804291	1 7·8	258 41 53·6	S.3 44 7·5	9

JUNE, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	6 1 4·30	+18·26	0·22	N.25 37 29·2	− 1·1	3·0	8·0
2	6 8 16·24	17·73	0·23	25 36 2·0	6·1	3·1	8·1
3	6 15 15·11	17·18	0·23	25 32 39·2	10·8	3·1	8·3
4	6 22 0·60	16·61	0·23	25 27 28·1	15·1	3·2	8·4
5	6 28 32·38	16·04	0·23	25 20 35·2	19·2	3·2	8·6
6	6 34 50·19	15·45	0·24	25 12 7·9	23·0	3·3	8·8
7	6 40 53·78	14·85	0·25	25 2 12·5	26·5	3·4	8·9
8	6 46 42·90	14·24	0·25	24 50 55·9	29·8	3·4	9·1
9	6 52 17·29	13·62	0·26	24 38 25·1	32·7	3·5	9·3
10	6 57 36·74	13·00	0·26	24 24 46·5	35·4	3·6	9·5
11	7 2 40·99	12·36	0·27	24 10 6·4	37·9	3·7	9·7
12	7 7 29·77	11·71	0·27	23 54 31·6	40·0	3·7	9·9
13	7 12 2·85	11·05	0·28	23 38 8·3	41·9	3·8	10·1
14	7 16 19·96	10·38	0·29	23 21 2·6	43·5	3·9	10·4
15	7 20 20·79	9·69	0·29	23 3 21·2	44·9	4·0	10·6
16	7 24 5·09	9·00	0·30	22 45 9·8	46·0	4·1	10·8
17	7 27 32·53	8·29	0·30	22 26 35·1	46·9	4·2	11·0
18	7 30 42·81	7·56	0·30	22 7 42·8	47·5	4·2	11·2
19	7 33 35·59	6·83	0·31	21 48 39·2	47·8	4·3	11·5
20	7 36 10·56	6·08	0·31	21 29 30·5	47·9	4·4	11·7
21	7 38 27·38	5·32	0·32	21 10 22·8	47·8	4·5	12·0
22	7 40 25·80	4·55	0·32	20 51 21·8	47·3	4·6	12·2
23	7 42 5·50	3·76	0·33	20 32 34·2	46 6	4·7	12·4
24	7 43 26·25	2·97	0·33	20 14 5·8	45·7	4·8	12·7
25	7 44 27·82	2·16	0·34	19 56 2·8	44·5	4·9	12·9
26	7 45 10·10	1·36	0·35	19 38 30·9	43·1	5·0	13·2
27	7 45 33·02	+ 0·55	0·36	19 21 36·6	41·4		13·4
28	7 45 36·58	− 0·25	0·36	19 5 25·7	39·5		6
29	7 45 20·98	1·05	0·36	18 50 3·4	37		3
30	7 44 46·51	1·82	0·37	18 35 35·7	3		
31	7 43 53·65	− 2·58	0·38	N.18 22 7·6	−		

JULY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	7 43 56·55	N. 18 22 44·4	9·7804291	1 7·8	258 41 53·6	S. 3 44 7·5
2	7 42 46·48	18 10 15·4	·7749432	1 2·7	261 27 4·9	4 0 58·5
3	7 41 19·34	17 58 56·0	·7700388	0 57·3	264 12 50·8	4 17 18·9
4	7 39 36·23	17 48 50·5	·7657723	0 51·7	266 59 23·7	4 33 7·2
5	7 37 38·47	17 40 2·3	·7621956	0 45·8	269 46 56·1	4 48 21·9
6	7 35 27·59	17 32 35·1	·7593596	0 39·7	272 35 40·5	5 3 1·1
7	7 33 5·48	17 26 31·2	·7573127	0 33·4	275 25 49·7	5 17 2·9
8	7 30 34·17	17 21 52·4	·7560965	0 26·9	278 17 37·0	5 30 25·2
9	7 27 55·93	17 18 40·0	·7557462	0 20·4	281 11 16·2	5 43 5·7
10	7 25 13·21	17 16 54·1	·7562900	0 13·8	284 7 1·5	5 55 1·7
11	7 22 28·61	17 16 34·0	·7577472	0 7·1	287 5 7·0	6 6 10·4
12	7 19 44·86	17 17 38·9	·7601268	{0 / 23 0·5 / 53·9}	290 5 47·4	6 16 28·5
13	7 17 4·69	17 20 6·2	·7634283	23 47·4	293 9 18·2	6 25 52·6
14	7 14 30·85	17 23 53·2	·7676412	23 41·1	296 15 55·5	6 34 18·8
15	7 12 6·01	17 28 55·8	·7727443	23 35·0	299 25 56·0	6 41 43·0
16	7 9 52·71	17 35 10·1	·7787066	23 29·1	302 39 37·0	6 48 0·5
17	7 7 53·39	17 42 30·6	·7854907	23 23·4	305 57 16·6	6 53 6·3
18	7 6 10·26	17 50 51·7	·7930506	23 18·0	309 19 13·4	6 56 54·9
19	7 4 45·35	18 0 7·0	·8013336	23 13·0	312 45 46·7	6 59 20·2
20	7 3 40·43	18 10 10·0	·8102844	23 8·4	316 17 16·7	7 0 15·8
21	7 2 57·04	18 20 53·2	·8198423	23 4·1	319 54 4·2	6 59 34·7
22	7 2 36·45	18 32 8·7	·8299456	23 0·2	323 36 30·7	6 57 9·6
23	7 2 39·79	18 43 48·5	·8405315	22 56·7	327 24 58·1	6 52 52·5
24	7 3 7·88	18 55 44·0	·8515358	22 53·6	331 19 48·6	6 46 35·3
25	7 4 1·43	19 7 46·0	·8628968	22 51·0	335 21 24·9	6 38 9·3
26	7 5 20·89	19 19 45·4	·8745522	22 48·8	339 30 9·4	6 27 26·1
27	7 7 6·57	19 31 32·4	·8864419	22 47·0	343 46 24·3	6 14 16·6
28	7 9 18·64	19 42 57·0	·8985072	22 45·7	348 10 30·7	5 58 32·6
29	7 11 57·11	19 53 48·7	·9106916	22 44·8	352 42 49·1	5 40 6 2
30	7 15 1·89	20 3 56·5	·9229391	22 44·4	357 23 37·5	5 18 51·1
31	7 18 32·70	20 13 10·1	·9351962	22 44·4	2 13 11·3	4 54 41·6
32	7 22 29·21	N. 20 21 17·5	9·9474106	22 44·8	7 11 42·9	S. 4 27 35·0

JULY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	7 43 53·65	− 2·58	0·38	N.18 22 7·6	−32·4	5·4	14·2
2	7 42 43·04	3·30	0·38	18 9 44·3	29·6	5·4	14·4
3	7 41 15·53	3·98	0·39	17 58 30·5	26·6	5·5	14·6
4	7 39 32·25	4·61	0·39	17 48 30·2	23·4	5·5	14·7
5	7 37 34·49	5·19	0·39	17 39 46·8	20·1	5·6	14·8
6	7 35 23·80	5·69	0·39	17 32 24·0	16·7	5·6	14·9
7	7 33 2·06	6·11	0·40	17 26 23·7	13·3	5·7	15·0
8	7 30 31·26	6·44	0·40	17 21 48·0	9·7	5·7	15·1
9	7 27 53·65	6·68	0·40	17 18 37·9	6·1	5·7	15·1
10	7 25 11·64	6·81	0·40	17 16 53·5	− 2·6	5·7	15·0
11	{7 22 27·80 / 7 19 44·81}	{6·83 / 6·74}	{0·40 / 0·39}	{17 16 34·1 / 17 17 39·0}	{+ 1·10 / 4·4}	{5·7 / 5·6}	{15·0 / 14·9}
12	7 17 5·36	6·53	0·39	17 20 5·5	7·8	5·6	14·8
13	7 14 32·16	6·22	0·38	17 23 50·9	11·0	5·5	14·6
14	7 12 7·85	5·79	0·38	17 28 51·3	14·0	5·5	14·5
15	7 9 54·93	5·27	0·37	17 35 2·9	16·9	5·4	14·3
16	7 7 55·81	4·65	0·37	17 42 20·4	19·5	5·3	14·1
17	7 6 12·67	3·94	0·37	17 50 38·3	21·9	5·2	13·8
18	7 4 47·55	3·15	0·36	17 59 50·1	24·0	5·1	13·6
19	7 3 42·23	2·29	0·35	18 9 49·6	25·9	5·0	13·3
20	7 2 58·22	1·37	0·34	18 20 29·5	27·4	4·9	13·0
21	7 2 36·82	− 0·40	0·34	18 31 41·9	28·6	4·8	12·7
22	7 2 39·16	+ 0·60	0·33	18 43 19·0	29·4	4·7	12·4
23	7 3 6·11	1·65	0·33	18 55 12·3	29·9	4·6	12·1
24	7 3 58·40	2·71	0·32	19 7 12·7	30·0	4·5	11·8
25	7 5 16·49	3·80	0·30	19 19 11·1	29·8	4·3	11·5
26	7 7 0·73	4·89	0·29	19 30 57·8	29·1	4·2	11·2
27	7 9 11·31	5·99	0·29	19 42 23·0	28·0	4·1	10·9
28	7 11 48·29	7·09	0·28	19 53 16·1	26·4	4·0	10·6
29	7 14 51·60	8·18	0·27	20 3 26·1		3·9	10·3
30	7 18 20·98	9·26	0·26	20 12 42·5		3·8	10·0
31	7 22 16·15	10·33	0·26	20 20 53·7		3·7	9·7
32	7 26 36·63	+11·37	0·25	N.20 27 48		3·5	

AUGUST, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	No
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	7 22 29·21	N.20 21 17·5	9·9474106	22 44·8	7 11 42·9	S. 4 27 35·0	9·537
2	7 26 50·91	20 28 7·7	·9595316	22 45·6	12 19 20·2	3 57 30·6	·539
3	7 31 37·17	20 33 29·7	·9715090	22 46·8	17 36 4·9	3 24 31·6	·523
4	7 36 47·21	20 37 11·3	·9832946	22 48·4	23 1 53·4	2 48 45·3	·517
5	7 42 20·13	20 39 2·1	9·9948413	22 50·3	28 36 33·1	2 10 24·0	·511
6	7 48 14·82	20 38 51·3	0·0061038	22 52·6	34 19 43·9	1 29 45·4	·506
7	7 54 30·05	20 36 29·1	·0170383	22 55·2	40 10 54·9	0 47 13·0	·501
8	8 1 4·41	20 31 46·5	·0276039	22 58·1	46 9 26·0	S. 0 3 16·2	·497
9	8 7 56·33	20 24 35·5	·0377617	23 1·3	52 14 25·5	N. 0 41 30·3	·493
10	8 15 4·07	20 14 50·4	·0474772	23 4·7	58 24 51·6	1 26 27·1	·490
11	8 22 25·79	20 2 26·1	·0567203	23 8·4	64 39 32·4	2 10 51·9	·488
12	8 29 59·54	19 47 20·3	·0654656	23 12·2	70 57 8·3	2 54 0·5	·488
13	8 37 43·32	19 29 32·0	·0736929	23 16·1	77 16 13·4	3 35 9·9	·488
14	8 45 35·09	19 9 2·4	·0813887	23 20·1	83 35 17·6	4 13 39·3	·488
15	8 53 32·85	18 45 55·0	·0885442	23 24·2	89 52 50·2	4 48 52·6	·490
16	9 1 34·69	18 20 14·8	·0951582	23 28·4	96 7 22·1	5 20 21·0	·494
17	9 9 38·76	17 52 8·2	·1012336	23 32·5	102 17 29·3	5 47 41·6	·499
18	9 17 43·39	17 21 43·2	·1067795	23 36·6	108 21 55·3	6 10 40·4	·505
19	9 25 47·08	16 49 8·6	·1118091	23 40·7	114 19 33·0	6 29 11·1	·509
20	9 33 48·48	16 14 34·3	·1163390	23 44·8	120 9 26·2	6 43 14·4	·513
21	9 41 46·47	15 38 10·3	·1203892	23 48·7	125 50 50·4	6 52 57·7	·516
22	9 49 40·08	15 0 6·8	·1239813	23 52·6	131 23 11·7	6 58 32·9	·520
23	9 57 28·55	14 20 34·2	·1271379	23 56·4	136 46 8·2	7 0 16·2	·522
24	10 5 11·27	13 39 42·0	·1298826	* *	141 59 27·5	6 58 25·9	·530
25	10 12 47·81	12 57 39·9	·1322392	0 0·1	147 3 7·2	6 53 22·1	·540
26	10 20 17·81	12 14 37·1	·1342307	0 3·6	151 57 10·9	6 45 24·9	·548
27	10 27 41·10	11 30 42·0	·1358798	0 7·1	156 41 49·6	6 34 54·9	·555
28	10 34 57·57	10 46 2·5	·1372072	0 10·4	161 17 18·6	6 22 11·4	·562
29	10 42 7·18	10 0 46·0	·1382331	0 13·6	165 43 57·8	6 7 32·5	·566
30	10 49 9·99	9 14 59·2	·1389758	0 16·7	170 2 9·0	5 51 15·1	·576
31	10 56 6·10	8 28 48·3	·1394529	0 19·7	174 12 16·7	5 33 34·7	·582
32	11 2 55·63	N. 7 42 18·9	0·1396802	0 22·6	178 14 46·0	N. 5 14 45·1	9·589

AUGUST, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	7 26 36·63	+11·37	0·25	N.20 27 48·4	+ 15·6	3·5	9·4
2	7 31 21·78	12·39	0·25	20 33 15·4	11·6	3·5	9·2
3	7 36 30·88	13·37	0·25	20 37 2·5	7·2	3·4	8·9
4	7 42 3·04	14·31	0·24	20 38 59·3	+ 2·4	3·3	8·7
5	7 47 57·16	15·20	0·23	20 38 54·8	− 2·9	3·2	8·5
6	7 54 12·04	16·03	0·22	20 36 38·8	8·5	3·1	8·2
7	8 0 46·27	16·81	0·22	20 32 2·3	14·7	3·0	8·0
8	8 7 38·29	17·51	0·21	20 24 57·1	21·0	2·9	7·8
9	8 14 46·35	18·14	0·21	20 15 17·4	27·5	2·9	7·7
10	8 22 8·60	18·70	0·20	20 2 57·7	34·2	2·8	7·5
11	8 29 43·08	19·16	0·20	19 47 55·6	41·0	2·8	7·4
12	8 37 27·76	19·55	0·19	19 30 10·1	47·8	2·7	7·2
13	8 45 20·61	19·84	0·19	19 9 42·2	54·5	2·7	7·1
14	8 53 19·55	20·05	0·19	18 46 35·5	61·0	2·6	7·0
15	9 1 22·68	20·19	0·19	18 20 54·9	67·3	2·6	6·9
16	9 9 28·11	20·25	0·19	17 52 46·9	73·3	2·6	6·8
17	9 17 34·13	20·24	0·18	17 22 19·4	78·9	2·5	6·7
18	9 25 39·24	20·17	0·18	16 49 41·5	84·2	2·5	6·6
19	9 33 42·05	20·05	0·18	16 15 2·8	89·0	2·5	6·6
20	9 41 41·43	19·89	0·18	15 38 33·9	93·4	2·5	6·5
21	9 49 36·39	19·69	0·18	15 0 25·0	97·3	2·5	6·5
22	9 57 26·15	19·46	0·17	14 20 46·6	100·8	2·4	6·4
23	10 5 10·12	19·20	0·17	13 39 48·3	104·0	2·4	6·4
24	10 12 47·83	18·94	0·17	12 57 39·8	106·7	2·4	6·3
25	* * *	*		* * *	*	*	*
26	10 20 18·94	18·66		12 14 30·6	109·0	2·4	6·3
27	10 27 43·27	18·37		11 30 29·0	111·0	2·4	6·3
28	10 35 0·70	18·08		45 4	2·7	2·4	6·3
29	10 42 11·21	1		0 2	1·1	2·3	6·2
30	10 49 14·86			14 2	3	2·3	6·2
31	10 56 11·76			3 1		2·3	6·2
32	11 3 2·02	+		3		2·3	6·2

SEPTEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	11 2 55·63	N. 7 42 18·9	0·1396802	0 22·6	178 14 46·0	N. 5 14 45·1
2	11 9 38·83	6 55 36·1	·1396717	0 25·4	182 10 2·8	4 54 58·6
3	11 16 15·81	6 8 44·6	·1394405	0 28·1	185 58 32·8	4 34 25·9
4	11 22 46·82	5 21 48·9	·1389981	0 30·7	189 40 41·7	4 13 17·0
5	11 29 12·07	4 34 52·6	·1383549	0 33·1	193 16 54·7	3 51 40·0
6	11 35 31·81	3 47 59·2	·1375198	0 35·5	196 47 36·2	3 29 42·2
7	11 41 46·25	3 1 12·2	·1365010	0 37·8	200 13 9·8	3 7 30·1
8	11 47 55·64	2 14 34·3	·1353052	0 40·1	203 33 58·0	2 45 9·0
9	11 54 0·20	1 28 8·5	·1339393	0 42·2	206 50 22·6	2 22 43·8
10	12 0 0·15	N. 0 41 57·1	·1324074	0 44·2	210 2 44·5	2 0 18·5
11	12 5 55·69	S. 0 3 57·2	·1307143	0 46·2	213 11 23·4	1 37 56·7
12	12 11 47·03	0 49 32·8	·1288634	0 48·1	216 16 38·3	1 15 41·3
13	12 17 34·37	1 34 47·3	·1268572	0 50·0	219 18 47·6	0 53 35·0
14	12 23 17·88	2 19 38·8	·1246974	0 51·8	222 18 8·6	0 31 39·9
15	12 28 57·73	3 4 5·6	·1223857	0 53·5	225 14 57·7	N. 0 9 58·2
16	12 34 34·08	3 48 6·0	·1199236	0 55·2	228 9 30·6	S. 0 11 28·4
17	12 40 7·07	4 31 38·0	·1173103	0 56·8	231 2 2·7	0 32 38·3
18	12 45 36·81	5 14 40·3	·1145460	0 58·3	233 52 48·9	0 53 30·3
19	12 51 3·44	5 57 11·3	·1116291	0 59·8	236 42 3·4	1 14 3·1
20	12 56 27·04	6 39 9·7	·1085590	1 1·3	239 29 59·9	1 34 15·7
21	13 1 47·69	7 20 33·5	·1053331	1 2·7	242 16 51·6	1 54 6·4
22	13 7 5·45	8 1 21·2	·1019496	1 4·0	245 2 51·4	2 13 34·5
23	13 12 20·36	8 41 31·7	·0984055	1 5·3	247 48 12·2	2 32 38·9
24	13 17 32·45	9 21 3·0	·0946976	1 6·6	250 33 6·8	2 51 18·8
25	13 22 41·71	9 59 53·8	·0908215	1 7·8	253 17 47·4	3 9 33·1
26	13 27 48·11	10 38 2·7	·0867738	1 9·0	256 2 26·5	3 27 20·5
27	13 32 51·61	11 15 27·5	·0825488	1 10·1	258 47 15·9	3 44 39·8
28	13 37 52·13	11 52 6·5	·0781427	1 11·1	261 32 27·9	4 1 29·8
29	13 42 49·56	12 27 58·2	·0735487	1 12·1	264 18 14·8	4 17 49·2
30	13 47 43·73	13 3 0·6	·0687619	1 13·1	267 4 49·1	4 33 36·5
31	13 52 34·51	S. 13 37 11·4	0·0637752	1 14·0	269 52 23·3	S. 4 48 50·1

SEPTEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	11 3 2·02	+16·96	0·15	N. 7 41 35·0	−116·8	2·3	6·2
2	11 9 45·89	16·70	0·15	6 54 46·6	117·2	2·3	6·2
3	11 16 23·50	16·44	0·15	6 7 49·7	117·5	2·3	6·2
4	11 22 55·09	16·19	0·15	5 20 48·9	117·6	2·3	6·2
5	11 29 20·87	15·96	0·15	4 33 47·7	117·5	2·3	6·2
6	11 35 41·11	15·73	0·16	3 46 49·8	117·3	2·4	6·3
7	11 41 56·02	15·51	0·16	2 59 58·6	117·0	2·4	6·3
8	11 48 5·84	15·31	0·16	2 13 16·6	116·5	2·4	6·3
9	11 54 10·80	15·11	0·16	1 26 47·1	115·9	2·4	6·3
10	12 0 11·13	14·92	0·16	N. 0 40 32·2	115·3	2·4	6·3
11	12 6 7·03	14·74	0·16	S. 0 5 25·3	114·5	2·4	6·4
12	12 11 58·70	14·57	0·16	0 51 4·0	113·7	2·4	6·4
13	12 17 46·35	14·40	0·16	1 36 21·2	112·8	2·4	6·4
14	12 23 30·16	14·25	0·16	2 21 15·2	111·7	2·4	6·4
15	12 29 10·29	14·10	0·17	3 5 44·2	110·7	2·5	6·5
16	12 34 46·90	13·95	0·17	3 49 46·7	109·5	2·5	6·5
17	12 40 20·13	13·82	0·17	4 33 20·4	108·3	2·5	6·5
18	12 45 50·10	13·68	0·17	5 16 24·2	107·0	2·5	6·6
19	12 51 16·94	13·55	0·17	5 58 56·6	105·7	2·5	6·6
20	12 56 40·74	13·43	0·17	6 40 56·1	104·3	2·5	6·7
21	13 2 1·58	13·31	0·17	7 22 20·8	102·8	2·5	6·7
22	13 7 19·51	13·19	0·17	8 3 9·1	101·2	2·6	6·8
23	13 12 34·57	13·07	0·18	8 43 20·1	99·7	2·6	6·8
24	13 17 46·80	12·95	0·18	9 22 51·7	98·0	2·6	6·9
25	13 22 56·19	12·83	0·18	10 1 42·6	96·3	2·6	7·0
26	13 28 2·70	12·71	0·18	10 39 51·2	94·5	2·6	7·0
27	13 33 6·30	12·59	0·18	11 17 15·6	92·6	2·7	
28	13 38 6·89	12·46	0·18	11 53 53·9			
29	13 43 4·38	12·33	0·18	12 29 44·7			
30	13 47 58·57	12·19	0·19	13 4 46			
31	13 52 49·36	+12·04	0·19	S. 13 3[illegible]			

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	R
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	13 52 34·51	S. 13 37 11·4	0·0637752	1 14·0	269 52 23·3	S. 4 48 50·1	9·6
2	13 57 21·63	14 10 28·6	·0585827	1 14·8	272 41 10·0	5 3 28·2	·6
3	14 2 4·83	14 42 49·8	·0531771	1 15·6	275 31 22·0	5 17 28·9	·6
4	14 6 43·80	15 14 12·5	·0475507	1 16·3	278 23 12·5	5 30 49·9	·6
5	14 11 18·14	15 44 33·7	·0416967	1 16·9	281 16 55·2	5 43 29·0	·6
6	14 15 47·41	16 13 50·7	·0356072	1 17·5	284 12 44·2	5 55 23·5	·6
7	14 20 11·11	16 42 0·2	·0292739	1 17·9	287 10 54·0	6 6 30·6	·6
8	14 24 28·66	17 8 58·8	·0226907	1 18·3	290 11 39·1	6 16 47·0	·6
9	14 28 39·35	17 34 42·5	·0158489	1 18·5	293 15 15·6	6 26 9·4	·6
10	14 32 42·42	17 59 7·1	·0087429	1 18·6	296 21 58·9	6 34 33·8	·6
11	14 36 36·99	18 22 7·8	0·0013666	1 18·6	299 32 5·8	6 41 56·0	·6
12	14 40 22·07	18 43 39·4	9·9937156	1 18·4	302 45 53·7	6 48 11·3	·6
13	14 43 56·53	19 3 36·4	·9857868	1 18·0	306 3 40·7	6 53 14·8	·6
14	14 47 19·12	19 21 52·2	·9775791	1 17·4	309 25 45·6	6 57 0·8	·6
15	14 50 28·45	19 38 19·9	·9690952	1 16·6	312 52 27·7	6 59 23·4	·6
16	14 53 22·94	19 52 51·4	·9603409	1 15·6	316 24 7·3	7 0 16·1	·6
17	14 56 0·89	20 5 17·8	·9513274	1 14·2	320 1 5·1	6 59 31·9	·6
18	14 58 20·41	20 15 29·5	·9420730	1 12·6	323 43 42·4	6 57 3·5	·6
19	15 0 19·51	20 23 15·6	·9326021	1 10·6	327 32 21·2	6 52 42·7	·5
20	15 1 55·99	20 28 24·0	·9229503	1 8·3	331 27 23·9	6 46 21·6	·5
21	15 3 7·61	20 30 41·5	·9131653	1 5·5	335 29 13·1	6 37 51·4	·5
22	15 3 52·09	20 29 53·9	·9033093	1 2·3	339 38 11·2	6 27 3·6	·5
23	15 4 7·17	20 25 46·6	·8934604	0 58·6	343 54 40·4	6 13 49·4	·5
24	15 3 50·69	20 18 3·4	·8837194	0 54·4	348 19 1·8	5 58 0·5	·5
25	15 3 0·84	20 6 29·5	·8742071	0 49·6	352 51 35·8	5 39 29·1	·5
26	15 1 36·26	19 50 51·0	·8650699	0 44·2	357 32 40·0	5 18 8·7	·5
27	14 59 36·27	19 30 56·4	·8564778	0 38·3	2 22 30·4	4 53 53·8	·5
28	14 57 1·14	19 6 39·0	·8486241	0 31·8	7 21 18·6	4 26 41·6	·5
29	14 53 52·37	18 37 58·8	·8417202	0 24·7	12 29 12·7	3 56 31·6	·5
30	14 50 12·79	18 5 5·5	·8359878	0 17·2	17 46 14·4	3 23 27·3	·5
31	14 46 6·83	17 28 19·8	·8316474	0 9·2	23 12 19·7	2 47 35·9	·5
32	14 41 40·50	S. 16 48 16·6	9·8289021	{0 0·8 / 13 9·3}	28 47 15·6	S. 2 9 10·1	9·5

OCTOBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	13 52 49·36	+12·04	0·19	S. 13 38 55·4	− 84·3	2·8	7·4
2	13 57 36·45	11·88	0·19	14 12 10·9	82·0	2·8	7·5
3	14 2 19·59	11·71	0·20	14 44 30·1	79·6	2·9	7·6
4	14 6 58·46	11·53	0·20	15 15 50·6	77·1	2·9	7·7
5	14 11 32·66	11·32	0·20	15 46 9·3	74·5	2·9	7·8
6	14 16 1·75	11·10	0·21	16 15 23·3	71·7	3·0	7·9
7	14 20 25·21	10·85	0·21	16 43 29·6	68·8	3·0	8·0
8	14 24 42·47	10·58	0·22	17 10 24·7	65·7	3·1	8·1
9	14 28 52·81	10·28	0·22	17 36 4·5	62·5	3·1	8·3
10	14 32 55·45	9·94	0·22	18 0 24·7	59·1	3·2	8·4
11	14 36 49·53	9·56	0·22	18 23 20·7	55·5	3·2	8·6
12	14 40 34·03	9·14	0·23	18 44 47·0	51·7	3·3	8·7
13	14 44 7·82	8·67	0·24	19 4 38·3	47·6	3·4	8·9
14	14 47 29·66	8·14	0·24	19 22 48·1	43·2	3·4	9·0
15	14 50 38·13	7·55	0·25	19 39 9·3	38·5	3·5	9·2
16	14 53 31·66	6·90	0·25	19 53 33·8	33·5	3·5	9·4
17	14 56 8·55	6·16	0·26	20 5 52·7	28·0	3·6	9·6
18	14 58 26·93	5·35	0·26	20 15 56·6	22·2	3·7	9·8
19	15 0 24·80	4·45	0·26	20 23 34·5	15·9	3·8	10·0
20	15 1 59·99	3·46	0·27	20 28 34·5	9·0	3·9	10·3
21	15 3 10·26	2·38	0·28	20 30 43·5	− 1·6	4·0	10·5
22	15 3 53·38	+ 1·20	0·28	20 29 47·5	+ 6·4	4·1	10·7
23	15 4 7·13	− 0·07	0·29	20 25 32·2	15·0	4·2	11·0
24	15 3 49·42	1·42	0·29	20 17 41·5	24·3	4·2	11·2
25	15 2 58·51	2·83	0·30	20 6 1·4	34·1	4·3	11·5
26	15 1 33·09	4·29	0·31	19 50 18·3	44·5	4·4	11·7
27	14 59 32·58	5·75	0·32	19 30 21·1	55·3	4·5	11·9
28	14 56 57·32	7·18	0·33	19 6 3·8	66·2	4·6	12·1
29	14 53 48·84	8·51	0·33	18 37 2[illegible]·0	76·8	4·6	12·3
30	14 50 10·00	9·70	0·33	18 4 40·5	86·9	4·7	12·5
31	14 46 5·19	10·66	0·33	5·0	95·8	4·8	12·7
32	14 41 40·33	−11·36	0·	·9	+103·0	4·8	12·8

NOVEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	14 41 40·50	S. 16 48 16·6	9·8289021	{0 0·8 / 23 51·3}	28 47 15·6	S. 2 9 10·1	9
2	14 37 1·17	16 5 44·2	·8279195	23 43·7	34 30 41·9	1 28 27·5	
3	14 32 17·33	15 21 44·1	·8288158	23 35·1	40 22 7·4	0 45 52·0	
4	14 27 38·03	14 37 27·7	·8316414	23 26·8	46 20 51·4	S. 0 1 53·2	
5	14 23 12·39	13 54 10·5	·8363706	23 18·8	52 26 1·7	N. 0 42 54·2	
6	14 19 8·81	13 13 8·8	·8429057	23 11·3	58 36 36·6	1 27 50·8	
7	14 15 34·65	12 35 31·0	·8510820	23 4·4	64 51 24·1	2 12 13·8	
8	14 12 35·67	12 2 14·9	·8606834	22 58·2	71 9 4·3	2 55 19·4	
9	14 10 15·97	11 34 3·5	·8714628	22 52·6	77 28 11·1	3 36 24·4	
10	14 8 37·91	11 11 24·7	·8831579	22 47·7	83 47 14·1	4 14 48·3	
11	14 7 42·28	10 54 30·9	·8955101	22 43·5	90 4 42·4	4 49 55·3	
12	14 7 28·55	10 43 21·7	·9082795	22 40·0	96 19 7·2	5 21 16·0	
13	14 7 55·12	10 37 45·1	·9212520	22 37·1	102 29 5·0	5 48 28·6	
14	14 8 59·69	10 37 22·0	·9342428	22 34·8	108 33 19·6	6 11 19·1	
15	14 10 39·47	10 41 47·6	·9471016	22 33·0	114 30 44·2	6 29 41·5	
16	14 12 51·45	10 50 33·9	·9597079	22 31·7	120 20 22·6	6 43 36·5	
17	14 15 32·53	11 3 11·8	·9719701	22 30·9	126 1 30·5	6 53 11·9	
18	14 18 39·69	11 19 12·2	·9838208	22 30·4	131 33 34·7	6 58 39·5	
19	14 22 10·05	11 38 7·2	9·9952147	22 30·3	136 56 13·8	7 0 15·9	
20	14 26 0·97	11 59 30·6	0·0061221	22 30·5	142 9 15·5	6 58 19·2	
21	14 30 10·04	12 22 57·5	·0165288	22 30·9	147 12 37·4	6 53 9·7	
22	14 34 35·10	12 48 6·4	·0264292	22 31·6	152 6 23·4	6 45 7·5	
23	14 39 14·24	13 14 37·2	·0358269	22 32·5	156 50 44·9	6 34 32·9	
24	14 44 5·78	13 42 12·2	·0447312	22 33·6	161 25 57·1	6 21 45·6	
25	14 49 8·25	14 10 35·6	·0531562	22 34·9	165 52 20·3	6 7 3·4	
26	14 54 20·39	14 39 33·3	·0611167	22 36·3	170 10 16·4	5 50 43·2	
27	14 59 41·09	15 8 53·2	·0686316	22 37·8	174 20 9·7	5 33 0·3	
28	15 5 9·44	15 38 24·3	·0757191	22 39·4	178 22 25·2	5 14 8·7	
29	15 10 44·60	16 7 57·1	·0823987	22 41·2	182 17 29·0	4 54 20·5	
30	15 16 25·91	16 37 23·4	·0886894	22 43·0	186 5 46·9	4 33 46·6	
31	15 22 12·79	S. 17 6 35·5	0·0946096	22 44·9	189 47 44·5	N. 4 12 36·6	9

NOVEMBER, 1855.

At Transit over the Meridian of Greenwich.

	Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
	14 41 40·33	−11·36	0·33	S. 16 48 14·9	+103·0	4·8	12·8
	{14 37 1·69}	{11·72}	{0·33}	{16 5 58·7}	{108·0}	{4·8}	{12·8}
	{14 32 20·55}	{11·73}	{0·33}	{15 22 14·3}	{110·2}	{4·8}	{12·7}
	14 27 42·78	11·34	0·33	14 38 13·4	109·4	4·8	12·7
	14 23 18·32	10·62	0·33	13 55 9·3	105·4	4·8	12·6
	14 19 15·41	9·57	0·33	13 14 16·9	98·5	4·7	12·4
	14 15 41·36	8·23	0·33	12 36 43·5	88·9	4·6	12·1
	14 12 41·89	6·69	0·32	12 3 26·6	77·2	4·5	11·8
	14 10 21·13	5·02	0·31	11 35 9·5	64·0	4·3	11·5
	14 8 41·56	3·27	0·29	11 12 20·7	50·0	4·2	11·2
	14 7 44·08	− 1·52	0·28	10 55 13·6	35·6	4·1	10·9
	14 7 28·24	+ 0·19	0·27	10 43 48·7	21·5	4·0	10·6
	14 7 52·61	1·82	0·27	10 37 55·4	+ 8·0	3·9	10·3
	14 8 54·98	3·35	0·26	10 37 15·4	− 4·5	3·8	10·0
	14 10 32·63	4·76	0·25	10 41 24·5	16·0	3·7	9·7
	14 12 42·60	6·05	0·24	10 49 55·2	26·3	3·6	9·4
	14 15 21·87	7·20	0·23	11 2 19·0	35·4	3·5	9·2
	14 18 27·40	8·24	0·23	11 18 7·3	43·4	3·4	8·9
	14 21 56·32	9·16	0·22	11 36 51·8	50·2	3·3	8·7
	14 25 46·01	9·97	0·21	11 58 6·7	55·9	3·2	8·5
	14 29 54·05	10·69	0·21	12 21 26·7	60·6	3·1	8·3
	14 34 18·26	11·32	0·21	12 46 30·4	64·5	3·1	8·1
	14 38 56·73	11·88	0·21	13 12 57·5	67·6	3·0	7·9
	14 43 47·74	12·37	0·20	13 40 30·1	70·0	2·9	7·7
	14 48 49·81	12·80	0·20	14 8 52·2	71·7	2·9	7·6
	14 54 1·68	13·18	0·19	14 37 49·7	73·0	2·8	7·5
	14 59 22·21	13·52	0·19	15 7 10·4	73·7	2·8	7·3
	15 4 50·50	13·83	0·19	15 36 43·0	74·0	2·7	7·2
	15 10 25·68	14·10	0·19	16 6 18·0	73·9	2·7	7·1
	15 16 7·08	14·35	0·19	16 35 47·0	73·5	2·6	7·0
	15 21 54·11	14·57	0·19	17 5 2·2	72·8	2·6	6·9
	15 27 46·25	+14·77	0·19	S. 17 33 57·4	− 71·8	2·6	6·8

DECEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	15 22 12·79	S. 17 6 35·5	0·0946096	22 44·9	189 47 44·5	N. 4 12 36·6
2	15 28 4·72	17 35 27·1	·1001770	22 46·9	193 23 46·9	3 50 58·8
3	15 34 1·29	18 3 52·2	·1054092	22 49·0	196 54 18·5	3 29 0·7
4	15 40 2·13	18 31 46·1	·1103219	22 51·1	200 19 42·8	3 6 48·0
5	15 46 6·96	18 59 3·4	·1149305	22 53·3	203 40 22·4	2 44 26·7
6	15 52 15·49	19 25 40·9	·1192492	22 55·6	206 56 39·3	2 22 1·5
7	15 58 27·51	19 51 34·4	·1232917	22 57·9	210 8 54·0	1 59 36·2
8	16 4 42·84	20 16 40·7	·1270695	23 0·3	213 17 26·5	1 37 14·1
9	16 11 1·29	20 40 56·7	·1305950	23 2·7	216 22 35·7	1 14 59·2
10	16 17 22·74	21 4 19·8	·1338784	23 5·2	219 24 39·5	0 52 53·4
11	16 23 47·06	21 26 47·3	·1369295	23 7·7	222 23 55·4	0 30 58·1
12	16 30 14·15	21 48 16·8	·1397573	23 10·2	225 20 39·9	N. 0 9 17·3
13	16 36 43·91	22 8 46·5	·1423698	23 12·8	228 15 9·1	S. 0 12 8·6
14	16 43 16·26	22 28 13·7	·1447742	23 15·5	231 7 38·0	0 33 18·1
15	16 49 51·11	22 46 37·1	·1469779	23 18·2	233 58 21·3	0 54 9·0
16	16 56 28·39	23 3 54·4	·1489859	23 20·9	236 47 33·2	1 14 41·1
17	17 3 8·03	23 20 4·1	·1508045	23 23·6	239 35 27·3	1 34 53·1
18	17 9 49·97	23 35 4·5	·1524379	23 26·4	242 22 17·1	1 54 43·7
19	17 16 34·14	23 48 53·9	·1538906	23 29·2	245 8 15·8	2 14 10·3
20	17 23 20·49	24 1 30·8	·1551661	23 32·1	247 53 36·0	2 33 14·6
21	17 30 8·93	24 12 54·1	·1562674	23 35·0	250 38 30·0	2 51 53·1
22	17 36 59·39	24 23 1·5	·1571967	23 38·0	253 23 10·4	3 10 7·3
23	17 43 51·83	24 31 52·3	·1579557	23 40·9	256 7 49·4	3 27 53·1
24	17 50 46·15	24 39 24·7	·1585462	23 43·9	258 52 39·4	3 45 12·1
25	17 57 42·29	24 45 37·9	·1589689	23 46·9	261 37 52·5	4 2 1·1
26	18 4 40·13	24 50 30·0	·1592239	23 50·0	264 23 40·9	4 18 19·6
27	18 11 39·60	24 54 0·0	·1593109	23 53·1	267 10 17·1	4 34 5·8
28	18 18 40·63	24 56 6·5	·1592293	23 56·2	269 57 53·4	4 49 18·3
29	18 25 43·11	24 56 48·4	·1589773	23 59·3	272 46 42·5	5 3 55·1
30	18 32 46·91	24 56 4·6	·1585532	* *	275 36 57·4	5 17 54·8
31	18 39 51·95	24 53 53·4	·1579540	0 2·5	278 28 51·4	5 31 14·6
32	18 46 58·09	S. 24 50 14·2	0·1571773	0 5·7	281 22 38·1	S. 5 43 52·4

DECEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
15 27 46·25	+14·77	0·19	S. 17 33 57·4	−71·8	2·6	6·8
15 33 43·09	14·96	0·18	18 2 26·4	70·6	2·5	6·7
15 39 44·26	15·13	0·18	18 30 24·4	69·2	2·5	6·7
15 45 49·43	15·30	0·18	18 57 46·0	67·6	2·5	6·6
15 51 58·34	15·45	0·18	19 24 27·8	65·9	2·5	6·5
15 58 10·79	15·59	0·18	19 50 25·9	64·0	2·5	6·5
16 4 26·58	15·72	0·17	20 15 36·7	61·9	2·4	6·4
16 10 45·53	15·85	0·17	20 39 57·3	59·8	2·4	6·4
16 17 7·50	15·98	0·17	21 3 25·0	57·5	2·4	6·3
16 23 32·37	16·10	0·17	21 25 57·0	55·2	2·4	6·3
16 30 0·03	16·21	0·17	21 47 31·0	52·7	2·3	6·2
16 36 30·39	16·32	0·17	22 8 5·0	50·1	2·3	6·2
16 43 3·36	16·43	0·17	22 27 36·4	47·5	2·3	6·1
16 49 38·85	16·53	0·17	22 46 3·9	44·8	2·3	6·1
16 56 16·81	16·63	0·17	23 3 25·1	42·0	2·3	6·1
17 2 57·14	16·73	0·17	23 19 38·6	39·1	2·3	6·1
17 9 39·79	16·82	0·17	23 34 42·7	36·2	2·3	6·0
17 16 24·69	16·91	0·17	23 48 35·4	33·2	2·3	6·0
17 23 11·79	17·00	0·17	24 1 15·5	30·1	2·3	6·0
17 30 1·00	17·09	0·17	24 12 41·6	27·0	2·3	6·0
17 36 52·25	17·18	0·17	24 22 51·7	23·8	2·3	6·0
17 43 45·50	17·26	0·17	24 31 44·8	20·6	2·3	6·0
17 50 40·65	17·34	0·17	24 39 19·2	17·3	2·3	6·0
17 57 37·64	17·41	0·17	24 45 34·1	13·9	2·3	6·0
18 4 36·34	17·48	0·16	24 50 27·6	10·5	2·2	5·9
18 11 36·68	17·55	0·16	24 53 58·8	7·1	2·2	5·9
18 18 38·61	17·61	0·16	24 56 6·1	− 3·5	2·2	5·9
18 25 41·99	17·67	0·17	24 56 48·4	0·0	2·2	5·9
18 32 46·71	17·72	0·18	24 56 4·6	+ 3·6	2·3	6·0
18 39 52·68	17·77	0·18	24 53 53·1	7·3	2·3	6·0
* * *	*	*	* * *	*	*	*
18 46 59·76	+17·82	0·18	S. 24 50 13·2	+11·0	2·3	6·0

JANUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*N*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	19 6 6·78	S. 23 26 46·6	0·2313809	0 23·9	291 18 52·0	S. 1 59 34·9	9·86
2	19 11 34·28	23 19 49·4	·2311860	0 25·4	292 53 42·3	2 4 4·9	·86
3	19 17 1·15	23 12 9·1	·2309814	0 26·9	294 28 32·6	2 8 29·2	·86
4	19 22 27·33	23 3 46·0	·2307671	0 28·4	296 3 22·9	2 12 47·6	·86
5	19 27 52·76	22 54 40·4	·2305432	0 29·9	297 38 13·2	2 16 59·9	·86
6	19 33 17·41	22 44 52·8	·2303096	0 31·3	299 13 3·7	2 21 6·0	·86
7	19 38 41·21	22 34 23·6	·2300662	0 32·8	300 47 54·3	2 25 5·6	·86
8	19 44 4·13	22 23 13·2	·2298130	0 34·2	302 22 45·2	2 28 58·5	·86
9	19 49 26·13	22 11 22·0	·2295500	0 35·6	303 57 36·4	2 32 44·7	·86
10	19 54 47·16	21 58 50·6	·2292771	0 37·0	305 32 27·9	2 36 23·9	·86
11	20 0 7·18	21 45 39·4	·2289941	0 38·4	307 7 19·8	2 39 55·9	·86
12	20 5 26·16	21 31 49·0	·2287010	0 39·8	308 42 12·2	2 43 20·7	·86
13	20 10 44·06	21 17 20·0	·2283977	0 41·2	310 17 5·1	2 46 38·0	·86
14	20 16 0·85	21 2 13·0	·2280841	0 42·5	311 51 58·5	2 49 47·7	·86
15	20 21 16·49	20 46 28·5	·2277601	0 43·8	313 26 52·5	2 52 49·6	·86
16	20 26 30·97	20 30 7·2	·2274256	0 45·1	315 1 47·2	2 55 43·7	·86
17	20 31 44·25	20 13 9·7	·2270804	0 46·4	316 36 42·6	2 58 29·7	·86
18	20 36 56·31	19 55 36·8	·2267246	0 47·7	318 11 38·8	3 1 7·7	·86
19	20 42 7·13	19 37 29·0	·2263581	0 48·9	319 46 35·7	3 3 37·3	·86
20	20 47 16·70	19 18 47·1	·2259808	0 50·1	321 21 33·5	3 5 58·6	·86
21	20 52 25·00	18 59 31·8	·2255927	0 51·3	322 56 32·1	3 8 11·3	·86
22	20 57 32·01	18 39 43·8	·2251937	0 52·5	324 31 31·6	3 10 15·5	·86
23	21 2 37·73	18 19 23·8	·2247840	0 53·6	326 6 32·1	3 12 11·0	·86
24	21 7 42·16	17 58 32·6	·2243634	0 54·8	327 41 33·5	3 13 57·7	·86
25	21 12 45·28	17 37 11·0	·2239320	0 55·9	329 16 35·9	3 15 35·6	·86
26	21 17 47·11	17 15 19·6	·2234898	0 57·0	330 51 39·4	3 17 4·5	·86
27	21 22 47·63	16 52 59·3	·2230369	0 58·0	332 26 43·9	3 18 24·4	·86
28	21 27 46·86	16 30 10·8	·2225732	0 59·1	334 1 49·5	3 19 35·2	·86
29	21 32 44·81	16 6 55·0	·2220987	1 0·1	335 36 56·2	3 20 36·9	·86
30	21 37 41·49	15 43 12·5	·2216134	1 1·1	337 12 4·1	3 21 29·5	·86
31	21 42 36·91	15 19 4·2	·2211173	1 2·1	338 47 13·1	3 22 12·8	·86
32	21 47 31·08	S. 14 54 30·8	0·2206104	1 3·1	340 22 23·3	S. 3 22 46·8	9·86

JANUARY, 1855

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
19 6 12·21	+13·67	0·35	S. 23 26 40·0	+ 16·5	4·8	5·0
19 11 40·05	13·65	0·35	23 19 41·7	18·3	4·8	5·0
19 17 7·24	13·62	0·35	23 12 0·1	20·1	4·8	5·0
19 22 33·74	13·59	0·35	23 3 35·6	21·9	4·8	5·0
19 27 59·50	13·56	0·35	22 54 28·7	23·7	4·8	5·0
19 33 24·46	13·53	0·35	22 44 39·6	25·4	4·8	5·0
19 38 48·57	13·49	0·35	22 34 8·8	27·1	4·9	5·1
19 44 11·79	13·45	0·35	22 22 56·7	28·8	4·9	5·1
19 49 34·09	13·41	0·35	22 11 3·9	30·5	4·9	5·1
19 54 55·40	13·37	0·35	21 58 30·7	32·2	4·9	5·1
20 0 15·71	13·32	0·35	21 45 17·7	33·9	4·9	5·1
20 5 34·96	13·28	0·35	21 31 25·5	35·5	4·9	5·1
20 10 53·13	13·23	0·35	21 16 54·6	37·1	4·9	5·1
20 16 10·18	13·19	0·35	21 1 45·6	38·7	4·9	5·1
20 21 26·08	13·14	0·35	20 45 59·2	40·2	4·9	5·1
20 26 40·80	13·09	0·34	20 29 35·9	41·7	4·9	5·1
20 31 54·33	13·04	0·34	20 12 36·4	43·2	4·9	5·1
20 37 6·62	12·98	0·34	19 55 1·2	44·7	4·9	5·1
20 42 17·66	12·93	0·34	19 36 51·4	46·1	4·9	5·1
20 47 27·45	12·88	0·34	19 18 7·4	47·5	4·9	5·1
20 52 35·96	12·83	0·34	18 58 50·0	48·9	4·9	5·1
20 57 43·18	12·78	0·34	18 38 59·8	50·3	4·9	5·1
21 2 49·09	12·72	0·34	18 18 37·7	51·6	4·9	5·1
21 7 53·71	12·67	0·34	17 57 44·4	52·9	4·9	5·1
21 12 57·02	12·61	0·34	17 36 20·6	54·1	4·9	5·1
21 17 59·02	12·56	0·34	17 14 27·1	55·3	4·9	5·1
21 22 59·72	12·50	0·34	16 52 4·7	56·5	4·9	5·1
21 27 59·11	12·45	0·34	16 29 14·1	57·6	4·9	5·1
21 32 57·22	12·40	0·34	16 5 56·1	58·8	4·9	5·1
21 37 54·05	12·34	0·35	15 42 11·6	59·9	5·0	5·2
21 42 49·62	12·29	0·35	15 18 1·2	61·0	5·0	5·2
21 47 43·93	+12·24	0·35	S. 14 53 25·7	+ 62·0	5·0	5·2

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	R
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 47 31·08	S. 14 54 30·8	0·2206104	1 3·1	340 22 23·3	S. 3 22 46·8	9·8
2	21 52 24·03	14 29 33·1	·2200927	1 4·0	341 57 34·7	3 23 11·5	·8
3	21 57 15·78	14 4 11·9	·2195640	1 4·9	343 32 47·4	3 23 26·9	·8
4	22 2 6·33	13 38 27·9	·2190244	1 5·8	345 8 1·3	3 23 33·0	·8
5	22 6 55·73	13 12 21·9	·2184737	1 6·7	346 43 16·5	3 23 29·7	·8
6	22 11 43·99	12 45 54·7	·2179118	1 7·6	348 18 33·0	3 23 17·1	·8
7	22 16 31·15	12 19 7·0	·2173386	1 8·4	349 53 50·8	3 22 55·1	·8
8	22 21 17·22	11 51 59·7	·2167539	1 9·2	351 29 10·0	3 22 23·7	·8
9	22 26 2·24	11 24 33·5	·2161576	1 10·0	353 4 30·5	3 21 43·1	·8
10	22 30 46·23	10 56 49·2	·2155496	1 10·8	354 39 52·3	3 20 53·1	·
11	22 35 29·24	10 28 47·5	·2149296	1 11·6	356 15 15·6	3 19 53·9	·
12	22 40 11·28	10 0 29·3	·2142976	1 12·3	357 50 40·2	3 18 45·4	·
13	22 44 52·39	9 31 55·3	·2136534	1 13·1	359 26 6·2	3 17 27·8	·
14	22 49 32·60	9 3 6·3	·2129967	1 13·8	1 1 33·6	3 16 1·0	·
15	22 54 11·95	8 34 3·0	·2123275	1 14·5	2 37 2·5	3 14 25·1	·
16	22 58 50·46	8 4 46·3	·2116457	1 15·2	4 12 32·8	3 12 40·2	·
17	23 3 28·18	7 35 16·9	·2109510	1 15·9	5 48 4·5	3 10 46·4	·
18	23 8 5·13	7 5 35·6	·2102434	1 16·6	7 23 37·7	3 8 43·8	·
19	23 12 41·36	6 35 43·3	·2095227	1 17·3	8 59 12·3	3 6 32·3	·
20	23 17 16·90	6 5 40·6	·2087888	1 17·9	10 34 48·4	3 4 12·2	·
21	23 21 51·79	5 35 28·4	·2080417	1 18·5	12 10 26·0	3 1 43·5	·
22	23 26 26·06	5 5 7·4	·2072812	1 19·2	13 46 5·0	2 59 6·3	·
23	23 30 59·75	4 34 38·4	·2065074	1 19·8	15 21 45·6	2 56 20·7	·
24	23 35 32·91	4 4 2·2	·2057202	1 20·4	16 57 27·7	2 53 27·0	·
25	23 40 5·57	3 33 19·4	·2049195	1 21·0	18 33 11·3	2 50 25·0	·
26	23 44 37·78	3 2 31·0	·2041053	1 21·6	20 8 56·4	2 47 15·2	·
27	23 49 9·57	2 31 37·5	·2032775	1 22·2	21 44 43·1	2 43 57·4	·
28	23 53 40·99	2 0 39·8	·2024360	1 22·8	23 20 31·3	2 40 32·0	·
29	23 58 12·08	S. 1 29 38·7	0·2015808	1 23·3	24 56 21·1	S. 2 36 59·0	9·

FEBRUARY, 1855

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
1 47 43·93	+12·24	0·35	S. 14 53 25·7	+ 62·0	5·0	5·2
1 52 37·02	12·19	0·35	14 28 26·0	63·0	5·0	5·2
1 57 28·90	12·14	0·35	14 3 2·8	63·9	5·0	5·2
2 2 19·58	12·09	0·35	13 37 16·8	64·9	5·0	5·2
2 7 9·10	12·04	0·35	13 11 8·9	65·8	5·0	5·2
2 11 57·49	12·00	0·35	12 44 39·7	66·7	5·0	5·2
2 16 44·76	11·95	0·35	12 17 50·2	67·5	5·0	5·2
2 21 30·95	11·91	0·35	11 50 41·0	68·2	5·0	5·2
2 26 16·07	11·86	0·35	11 23 13·0	69·0	5·0	5·2
2 31 0·17	11·82	0·34	10 55 26·9	69·7	5·0	5·2
2 35 43·28	11·78	0·34	10 27 23·5	70·5	5·0	5·2
2 40 25·42	11·74	0·34	9 59 3·6	71·2	5·0	5·2
2 45 6·63	11·70	0·34	9 30 27·9	71·8	5·0	5·2
2 49 46·94	11·67	0·34	9 1 37·3	72·4	5·1	5·3
2 54 26·38	11·63	0·34	8 32 32·4	73·0	5·1	5·3
2 59 4·99	11·60	0·34	8 3 14·2	73·5	5·1	5·3
3 3 42·80	11·56	0·34	7 33 43·3	74·0	5·1	5·3
3 8 19·84	11·53	0·34	7 4 0·6	74·5	5·1	5·3
3 12 56·16	11·50	0·34	6 34 6·8	75·0	5·1	5·3
3 17 31·79	11·47	0·34	6 4 2·8	75·4	5·1	5·3
3 22 6·76	11·45	0·34	5 33 49·3	75·7	5·1	5·3
3 26 41·12	11·42	0·34	5 3 27·1	76·1	5·1	5·3
3 31 14·90	11·40	0·34	4 32 56·9	76·4	5·1	5·3
3 35 48·15	11·38	0·34	4 2 19·5	76·7	5·1	5·3
3 40 20·89	11·36	0·35	3 31 35·6	76·9	5·2	5·4
3 44 53·19	11·34	0·35	3 0 46·1	77·2	5·2	5·4
3 49 25·07	11·32	0·35	2 29 51·6	77·4	5·2	5·4
3 53 56·58	11·30	0·35	1 58 52·9	77·5	5·2	5·4
3 58 27·76	+11·29	0·35	S. 1 27 50·9	+ 77·6	5·2	5·4

MARCH, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	23 58 12·08	S. 1 29 38·7	0·2015808	1 23·3	24 56 21·1	S. 2 36 59·0
2	0 2 42·89	0 58 34·8	·2007119	1 23·9	26 32 12·4	2 33 18·6
3	0 7 13·46	S. 0 27 28·8	·1998291	1 24·5	28 8 5·3	2 29 31·1
4	0 11 43·84	N. 0 3 38·4	·1989323	1 25·0	29 43 59·8	2 25 36·4
5	0 16 14·07	0 34 46·2	·1980215	1 25·6	31 19 56·0	2 21 34·0
6	0 20 44·20	1 5 54·0	·1970964	1 26·2	32 55 53·7	2 17 26·0
7	0 25 14·26	1 37 0·8	·1961571	1 26·7	34 31 53·0	2 13 11·0
8	0 29 44·31	2 8 6·1	·1952032	1 27·3	36 7 54·0	2 8 50·1
9	0 34 14·38	2 39 9·1	·1942347	1 27·8	37 43 56·6	2 4 23·0
10	0 38 44·52	3 10 9·0	·1932513	1 28·4	39 20 0·9	1 59 50·1
11	0 43 14·78	3 41 5·2	·1922529	1 29·0	40 56 6·8	1 55 11·0
12	0 47 45·19	4 11 56·9	·1912392	1 29·5	42 32 14·4	1 50 27·1
13	0 52 15·80	4 42 43·4	·1902100	1 30·1	44 8 23·7	1 45 37·0
14	0 56 46·66	5 13 24·0	·1891651	1 30·7	45 44 34·7	1 40 42·0
15	1 1 17·79	5 43 58·0	·1881043	1 31·2	47 20 47·4	1 35 43·2
16	1 5 49·24	6 14 24·5	·1870272	1 31·8	48 57 1·8	1 30 39·2
17	1 10 21·05	6 44 42·9	·1859337	1 32·4	50 33 17·9	1 25 30·1
18	1 14 53·26	7 14 52·4	·1848235	1 33·0	52 9 35·8	1 20 18·0
19	1 19 25·90	7 44 52·2	·1836965	1 33·6	53 45 55·4	1 15 1·4
20	1 23 59·01	8 14 41·6	·1825526	1 34·2	55 22 16·8	1 9 41·2
21	1 28 32·62	8 44 19·8	·1813915	1 34·8	56 58 40·0	1 4 17·0
22	1 33 6·76	9 13 46·1	·1802132	1 35·5	58 35 4·9	0 58 50·8
23	1 37 41·48	9 42 59·7	·1790175	1 36·1	60 11 31·5	0 53 21·1
24	1 42 16·79	10 11 59·9	·1778043	1 36·7	61 48 0·0	0 47 48·8
25	1 46 52·74	10 40 45·8	·1765734	1 37·4	63 24 30·2	0 42 14·1
26	1 51 29·36	11 9 16·8	·1753248	1 38·1	65 1 2·3	0 36 37·3
27	1 56 6·67	11 37 32·1	·1740584	1 38·8	66 37 36·1	0 30 58·7
28	2 0 44·71	12 5 30·9	·1727740	1 39·5	68 14 11·7	0 25 18·4
29	2 5 23·51	12 33 12·5	·1714715	1 40·2	69 50 49·2	0 19 36·9
30	2 10 3·09	13 0 36·1	·1701509	1 40·9	71 27 28·5	0 13 54·3
31	2 14 43·48	13 27 41·1	·1688121	1 41·6	73 4 9·5	0 8 11·0
32	2 19 24·72	N. 13 54 26·7	0·1674549	1 42·4	74 40 52·4	S. 0 2 27·1

MARCH, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	23 58 27·76	+11·29	0·35	S. 1 27 50·9	+77·6	5·2	5·4
2	0 2 58·66	11·28	0·35	0 56 46·1	77·7	5·2	5·4
3	0 7 29·33	11·27	0·35	S. 0 25 39·3	77·8	5·2	5·4
4	0 11 59·80	11·27	0·35	N. 0 5 28·7	77·8	5·2	5·4
5	0 16 30·13	11·26	0·35	0 36 37·3	77·9	5·2	5·4
6	0 21 0·35	11·26	0·35	1 7 45·7	77·8	5·2	5·4
7	0 25 30·52	11·26	0·36	1 38 53·2	77·8	5·3	5·5
8	0 30 0·68	11·26	0·36	2 9 59·1	77·7	5·3	5·5
9	0 34 30·86	11·26	0·36	2 41 2·6	77·6	5·3	5·5
10	0 39 1·11	11·27	0·36	3 12 3·0	77·5	5·3	5·5
11	0 43 31·48	11·27	0·36	3 42 59·7	77·3	5·3	5·5
12	0 48 2·01	11·28	0·36	4 13 51·8	77·1	5·3	5·5
13	0 52 32·74	11·29	0·36	4 44 38·7	76·9	5·3	5·5
14	0 57 3·72	11·30	0·36	5 15 19·7	76·6	5·3	5·5
15	1 1 34·98	11·31	0·37	5 45 53·9	76·3	5·4	5·6
16	1 6 6·56	11·32	0·37	6 16 20·7	76·0	5·4	5·6
17	1 10 38·51	11·34	0·37	6 46 39·3	75·6	5·4	5·6
18	1 15 10·86	11·36	0·37	7 16 48·9	75·2	5·4	5·6
19	1 19 43·64	11·38	0·37	7 46 48·8	74·8	5·4	5·6
20	1 24 16·89	11·40	0·37	8 16 38·3	74·3	5·4	5·6
21	1 28 50·66	11·42	0·37	8 46 16·5	73·8	5·4	5·6
22	1 33 24·96	11·44	0·38	9 15 42·8	73·3	5·5	5·7
23	1 37 59·83	11·47	0·38	9 44 56·3	72·8	5·5	5·7
24	1 42 35·31	11·49	0·38	10 13 56·3	72·2	5·5	5·7
25	1 47 11·43	11·52	0·38	10 42 42·1	71·6	5·5	5·7
26	1 51 48·22	11·55	0·38	11 11 12·8	71·0	5·5	5·7
27	1 56 25·72	11·58	0·38	11 39 27·8	70·3	5·5	5·7
28	2 1 3·94	11·61	0·39	12 7 26·2	69·6	5·6	5·8
29	2 5 42·93	11·64	0·39	12 35 7·4	68·8	5·6	5·8
30	2 10 22·70	11·67	0·39	13 2 30·6	68·1	5·6	5·8
31	2 15 3·30	11·71	0·39	13 29 35·1	67·3	5·6	5·8
32	2 19 44·74	+11·75	0·39	N. 13 56 20·1	+66·5	5·6	5·8

APRIL, 1855

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	L Rad
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 19 24·72	N.13 54 26·7	0·1674549	1 42·4	74 40 52·4	S.0 2 27·1	9·8
2	2 24 6·82	14 20 52·2	·1660792	1 43·1	76 17 37·1	N.0 3 17·0	·8
3	2 28 49·82	14 46 56·8	·1646850	1 43·9	77 54 23·6	0 9 1·0	·8
4	2 33 33·73	15 12 39·9	·1632720	1 44·7	79 31 11·9	0 14 44·7	·8
5	2 38 18·57	15 38 0·6	·1618401	1 45·5	81 8 2·0	0 20 27·9	·8
6	2 43 4·37	16 2 58·3	·1603892	1 46·3	82 44 53·9	0 26 10·1	·8
7	2 47 51·15	16 27 32·2	·1589191	1 47·1	84 21 47·6	0 31 51·2	·8
8	2 52 38·91	16 51 41·6	·1574295	1 48·0	85 58 43·0	0 37 30·8	·8
9	2 57 27·68	17 15 25·9	·1559202	1 48·9	87 35 40·1	0 43 8·8	·8
10	3 2 17·47	17 38 44·3	·1543909	1 49·8	89 12 38·9	0 48 44·8	·8
11	3 7 8·28	18 1 36·1	·1528413	1 50·7	90 49 39·5	0 54 18·5	·8
12	3 12 0·12	18 24 0·5	·1512712	1 51·6	92 26 41·7	0 59 49·8	·8
13	3 16 52·99	18 45 56·9	·1496804	1 52·5	94 3 45·6	1 5 18·2	·8
14	3 21 46·90	19 7 24·5	·1480685	1 53·5	95 40 51·2	1 10 43·6	·8
15	3 26 41·84	19 28 22·7	·1464352	1 54·5	97 17 58·4	1 16 5·6	·8
16	3 31 37·81	19 48 50·7	·1447804	1 55·5	98 55 7·1	1 21 24·1	·8
17	3 36 34·80	20 8 47·9	·1431038	1 56·5	100 32 17·4	1 26 38·8	·8
18	3 41 32·80	20 28 13·6	·1414051	1 57·5	102 9 29·2	1 31 49·4	·8
19	3 46 31·80	20 47 7·1	·1396841	1 58·5	103 46 42·6	1 36 55·6	·8
20	3 51 31·77	21 5 27·7	·1379407	1 59·6	105 23 57·4	1 41 57·2	·8
21	3 56 32·70	21 23 14·8	·1361746	2 0·7	107 1 13·6	1 46 54·0	·8
22	4 1 34·56	21 40 27·8	·1343857	2 1·8	108 38 31·2	1 51 45·7	·8
23	4 6 37·34	21 57 6·0	·1325737	2 2·9	110 15 50·0	1 56 32·0	·8
24	4 11 41·00	22 13 8·8	·1307386	2 4·0	111 53 10·2	2 1 12·8	·8
25	4 16 45·51	22 28 35·8	·1288803	2 5·1	113 30 31·6	2 5 47·8	·8
26	4 21 50·85	22 43 26·3	·1269985	2 6·3	115 7 54·2	2 10 16·8	·8
27	4 26 56·97	22 57 39·9	·1250933	2 7·4	116 45 17·9	2 14 39·5	·8
28	4 32 3·85	23 11 15·9	·1231644	2 8·6	118 22 42·6	2 18 55·8	·8
29	4 37 11·45	23 24 14·0	·1212118	2 9·8	120 0 8·4	2 23 5·4	·8
30	4 42 19·72	23 36 33·6	·1192354	2 11·0	121 37 35·0	2 27 8·1	·8
31	4 47 28·63	N.23 48 14·3	0·1172351	2 12·2	123 15 2·6	N.2 31 3·8	9·8

APRIL, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
19 44·74	+11·75	0·39	N.13 56 20·1	+ 66·5	5·6	5·8
24 27·06	11·79	0·39	14 22 44·9	65·6	5·7	5·9
29 10·27	11·82	0·39	14 48 48·8	64·7	5·7	5·9
33 54·40	11·86	0·39	15 14 31·2	63·8	5·7	5·9
38 39·47	11·90	0·39	15 39 51·1	62·8	5·7	5·9
43 25·51	11·94	0·39	16 4 47·9	61·9	5·7	5·9
48 12·52	11·98	0·40	16 29 20·9	60·9	5·8	6·0
53 0·53	12·03	0·40	16 53 29·3	59·9	5·8	6·0
57 49·55	12·07	0·40	17 17 12·5	58·8	5·8	6·0
2 39·60	12·11	0·40	17 40 29·8	57·7	5·8	6·0
7 30·67	12·15	0·40	18 3 20·4	56·5	5·8	6·0
12 22·78	12·20	0·41	18 25 43·5	55·4	5·9	6·1
17 15·92	12·24	0·41	18 47 38·6	54·2	5·9	6·1
22 10·11	12·28	0·41	19 9 4·8	53·0	5·9	6·1
27 5·33	12·33	0·41	19 30 1·4	51·7	5·9	6·1
32 1·59	12·37	0·41	19 50 27·9	50·5	5·9	6·1
36 58·87	12·41	0·42	20 10 23·4	49·2	6·0	6·2
41 57·16	12·45	0·42	20 29 47·3	47·9	6·0	6·2
46 56·45	12·49	0·43	20 48 38·9	46·5	6·0	6·2
51 56·73	12·53	0·43	21 6 57·6	45·1	6·0	6·2
56 57·96	12·57	0·44	21 24 42·7	43·7	6·1	6·3
2 0·13	12·61	0·44	21 41 53·5	42·3	6·1	6·3
7 3·21	12·65	0·44	21 58 29·5	40·8	6·1	6·3
12 7·18	12·68	0·45	22 14 30·1	39·3	6·2	6·4
17 12·01	12·72	0·45	22 29 54·6	37·8	6·2	6·4
22 17·66	12·75	0·45	22 44 42·7	36·3	6·2	6·4
27 24·10	12·78	0·45	22 58 53·6	34·7	6·2	6·4
32 31·29	12·81	0·46	23 12 27·0	33·1	6·3	6·5
37 39·20	12·84	0·46	23 25 22·3	31·5	6·3	6·5
42 47·80	12·87	0·46	23 37 39·0	29·9	6·3	6·5
47 57·02	+12·90	0·47	N.23 49 16·7	+ 28·3	6·3	6·6

MAY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	R
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 47 28·63	N.23 48 14·3	0·1172351	2 12·2	123 15 2·6	N.2 31 3·8	9
2	4 52 38·14	23 59 15·7	·1152106	2 13·4	124 52 31·0	2 34 52·2	
3	4 57 48·19	24 9 37·5	·1131619	2 14·6	126 30 0·1	2 38 33·1	
4	5 2 58·74	24 19 19·2	·1110888	2 15·9	128 7 29·9	2 42 6·4	
5	5 8 9·75	24 28 20·6	·1089910	2 17·1	129 45 0·3	2 45 31·9	
6	5 13 21·16	24 36 41·3	·1068684	2 18·4	131 22 31·2	2 48 49·4	
7	5 18 32·91	24 44 21·0	·1047207	2 19·6	133 0 2·6	2 51 58·7	
8	5 23 44·95	24 51 19·4	·1025477	2 20·9	134 37 34·4	2 54 59·8	
9	5 28 57·23	24 57 36·3	·1003490	2 22·2	136 15 6·5	2 57 52·4	
10	5 34 9·68	25 3 11·6	·0981244	2 23·4	137 52 38·8	3 0 36·5	
11	5 39 22·25	25 8 4·9	·0958735	2 24·7	139 30 11·2	3 3 11·8	
12	5 44 34·88	25 12 16·2	·0935961	2 25·9	141 7 43·7	3 5 38·3	
13	5 49 47·49	25 15 45·4	·0912917	2 27·2	142 45 16·2	3 7 55·8	
14	5 55 0·03	25 18 32·3	·0889602	2 28·5	144 22 48·6	3 10 4·3	
15	6 0 12·42	25 20 36·9	·0866011	2 29·7	146 0 20·8	3 12 3·6	
16	6 5 24·60	25 21 59·2	·0842142	2 31·0	147 37 52·7	3 13 53·6	
17	6 10 36·49	25 22 39·2	·0817991	2 32·3	149 15 24·2	3 15 34·3	
18	6 15 48·03	25 22 37·0	·0793557	2 33·5	150 52 55·3	3 17 5·6	
19	6 20 59·15	25 21 52·5	·0768835	2 34·8	152 30 25·8	3 18 27·3	
20	6 26 9·76	25 20 25·9	·0743823	2 36·0	154 7 55·7	3 19 39·5	
21	6 31 19·81	25 18 17·4	·0718520	2 37·2	155 45 24·8	3 20 42·0	
22	6 36 29·22	25 15 27·1	·0692923	2 38·4	157 22 53·2	3 21 34·9	
23	6 41 37·93	25 11 55·2	·0667029	2 39·6	159 0 20·6	3 22 18·0	
24	6 46 45·87	25 7 42·0	·0640837	2 40·8	160 37 47·0	3 22 51·4	
25	6 51 52·96	25 2 47·7	·0614345	2 42·0	162 15 12·4	3 23 15·1	
26	6 56 59·15	24 57 12·7	·0587552	2 43·2	163 52 36·6	3 23 29·0	
27	7 2 4·38	24 50 57·3	·0560455	2 44·3	165 29 59·6	3 23 33·1	
28	7 7 8·57	24 44 1·8	·0533053	2 45·4	167 7 21·3	3 23 27·4	
29	7 12 11·68	24 36 26·6	·0505343	2 46·5	168 44 41·5	3 23 12·0	
30	7 17 13·64	24 28 12·1	·0477326	2 47·6	170 22 0·3	3 22 46·9	
31	7 22 14·41	24 19 18·7	·0448998	2 48·7	171 59 17·5	3 22 12·0	
32	7 27 13·93	N.24 9 46·9	0·0420358	2 49·7	173 36 33·0	N.3 21 27·5	9

MAY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
47 57·02	+12·90	0·47	N.23 49 16·7	+28·3	6·3	6·6
53 6·84	12·92	0·47	24 0 15·0	26·6	6·3	6·6
58 17·20	12·94	0·47	24 10 33·6	24·9	6·3	6·6
3 28·07	12·96	0·47	24 20 12·1	23·3	6·3	6·6
8 39·39	12·98	0·48	24 29 10·1	21·6	6·4	6·7
13 51·10	13·00	0·48	24 37 27·3	19·8	6·4	6·7
19 3·15	13·01	0·48	24 45 3·4	18·1	6·4	6·7
24 15·50	13·02	0·48	24 51 58·1	16·4	6·5	6·8
29 28·07	13·03	0·48	24 58 11·3	14·7	6·5	6·8
34 40·81	13·03	0·48	25 3 42·6	13·0	6·5	6·8
39 53·66	13·04	0·49	25 8 32·0	11·2	6·6	6·9
45 6·56	13·04	0·49	25 12 39·3	9·5	6·6	6·9
50 19·44	13·04	0·50	25 16 4·4	7·7	6·7	7·0
55 32·24	13·03	0·50	25 18 47·1	5·9	6·7	7·0
0 44·89	13·02	0·50	25 20 47·4	4·1	6·7	7·0
5 57·32	13·00	0·51	25 22 5·4	2·4	6·8	7·1
11 9·45	12·99	0·51	25 22 41·0	+ 0·6	6·8	7·1
16 21·22	12·98	0·51	25 22 34·2	− 1·2	6·8	7·1
21 32·56	12·96	0·51	25 21 45·2	3·0	6·9	7·2
26 43·38	12·93	0·51	25 20 14·0	4·7	6·9	7·2
31 53·62	12·91	0·52	25 18 0·8	6·5	7·0	7·3
37 3·22	12·88	0·52	25 15 5·8	8·2	7·0	7·3
42 12·11	12·85	0·53	25 11 29·2	9·9	7·1	7·4
47 20·21	12·82	0·53	25 7 11·2	11·6	7·1	7·4
52 27·45	12·78	0·53	25 2 12·1	13·3	7·1	7·4
57 33·78	12·74	0·54	24 56 32·2	15·0	7·2	7·5
2 39·14	12·70	0·54	24 50 11·9	16·7	7·2	7·5
7 43·45	12·65	0·54	24 43 11·5	18·3	7·3	7·6
12 46·66	12·61	0·54	24 35 31·4	20·0	7·3	7·6
17 48·71	12·56	0·55	24 27 12·0	21·6	7·4	7·7
·26	12·51	0·55	24 18 13·7	23·2	7·4	7·7
	12·46	0·55	N.24 8 37·0	−24·8	7 5	7·8

JUNE, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	R
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	7 27 13·93	N.24 9 46·9	0·0420358	2 49·7	173 36 33·0	N.3 21 27·5	9
2	7 32 12·17	23 59 37·2	·0391405	2 50·8	175 13 46·8	3 20 33·3	
3	7 37 9·06	23 48 50·1	·0362134	2 51·8	176 50 58·8	3 19 29·5	
4	7 42 4·57	23 37 26·1	·0332545	2 52·8	178 28 8·9	3 18 16·2	
5	7 46 58·66	23 25 25·7	·0302634	2 53·7	180 5 17·0	3 16 53·4	
6	7 51 51·29	23 12 49·5	·0272398	2 54·6	181 42 23·2	3 15 21·3	
7	7 56 42·42	22 59 38·0	·0241832	2 55·5	183 19 27·2	3 13 39·8	
8	8 1 32·01	22 45 51·8	·0210935	2 56·4	184 56 29·1	3 11 49·2	
9	8 6 20·03	22 31 31·5	·0179702	2 57·3	186 33 28·8	3 9 49·4	
10	8 11 6·45	22 16 37·7	·0148127	2 58·1	188 10 26·2	3 7 40·7	
11	8 15 51·23	22 1 11·0	·0116207	2 58·9	189 47 21·3	3 5 23·0	
12	8 20 34·35	21 45 12·0	·0083937	2 59·7	191 24 14·0	3 2 56·6	
13	8 25 15·78	21 28 41·5	·0051312	3 0·4	193 1 4·3	3 0 21·5	
14	8 29 55·48	21 11 40·0	0·0018327	3 1·1	194 37 52·2	2 57 38·0	
15	8 34 33·43	20 54 8·3	9·9984978	3 1·8	196 14 37·5	2 54 46·0	
16	8 39 9·61	20 36 7·0	·9951262	3 2·5	197 51 20·3	2 51 45·9	
17	8 43 43·99	20 17 36·9	·9917174	3 3·1	199 28 0·5	2 48 37·6	
18	8 48 16·55	19 58 38·6	·9882709	3 3·7	201 4 38·1	2 45 21·5	
19	8 52 47·27	19 39 12·9	·9847864	3 4·3	202 41 13·0	2 41 57·6	
20	8 57 16·13	19 19 20·5	·9812636	3 4·8	204 17 45·3	2 38 26·1	
21	9 1 43·11	18 59 2·2	·9777020	3 5·3	205 54 14·8	2 34 47·2	
22	9 6 8·20	18 38 18·7	·9741013	3 5·8	207 30 41·6	2 31 1·1	
23	9 10 31·39	18 17 10·7	·9704613	3 6·2	209 7 5·7	2 27 7·9	
24	9 14 52·65	17 55 39·1	·9667815	3 6·6	210 43 27·0	2 23 7·9	
25	9 19 11·98	17 33 44·5	·9630617	3 7·0	212 19 45·6	2 19 1·3	
26	9 23 29·38	17 11 27·8	·9593016	3 7·3	213 56 1·4	2 14 48·2	
27	9 27 44·84	16 48 49·6	·9555009	3 7·6	215 32 14·5	2 10 28·9	
28	9 31 58·34	16 25 50·7	·9516593	3 7·9	217 8 24·8	2 6 3·6	
29	9 36 9·90	16 2 31·8	·9477765	3 8·2	218 44 32·4	2 1 32·5	
30	9 40 19·50	15 38 53·7	·9438522	3 8·4	220 20 37·2	1 56 55·7	
31	9 44 27·15	N.15 14 57·1	9·9398861	3 8·6	221 56 39·3	N.1 52 13·6	9

JUNE, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	7 27 49·15	+12·46	0·55	N.24 8 37·0	−24·8	7·5	7·8
2	7 32 47·44	12·40	0·55	23 58 22·4	26·4	7·5	7·8
3	7 37 44·38	12·34	0·56	23 47 30·4	27·9	7·6	7·9
4	7 42 39·93	12·28	0·56	23 36 1·6	29·5	7·6	7·9
5	7 47 34·04	12·22	0·56	23 23 56·4	31·0	7·7	8·0
6	7 52 26·68	12·16	0·57	23 11 15·4	32·5	7·8	8·1
7	7 57 17·80	12·10	0·57	22 57 59·1	33·9	7·8	8·1
8	8 2 7·38	12·03	0·57	22 44 8·2	35·3	7·9	8·2
9	8 6 55·38	11·97	0·57	22 29 43·2	36·7	7·9	8·2
10	8 11 41·76	11·90	0·58	22 14 44·8	38·1	8·0	8·3
11	8 16 26·50	11·83	0·58	21 59 13·6	39·5	8·1	8·4
12	8 21 9·56	11·76	0·58	21 43 10·1	40·8	8·1	8·4
13	8 25 50·92	11·69	0·59	21 26 35·2	42·1	8·2	8·5
14	8 30 30·54	11·62	0·59	21 9 29·4	43·4	8·2	8·5
15	8 35 8·40	11·54	0·59	20 51 53·4	44·6	8·3	8·6
16	8 39 44·48	11·47	0·60	20 33 47·9	45·8	8·4	8·7
17	8 44 18·75	11·40	0·60	20 15 13·7	47·0	8·4	8·7
18	8 48 51·19	11·32	0·60	19 56 11·4	48·2	8·5	8·8
19	8 53 21·78	11·24	0·61	19 36 41·8	49·3	8·6	8·9
20	8 57 50·50	11·16	0·61	19 16 45·6	50·4	8·7	9·0
21	9 2 17·33	11·08	0·61	18 56 23·6	51·4	8·7	9·0
22	9 6 42·26	11·00	0·62	18 35 36·4	52·5	8·8	9·1
23	9 11 5·28	10·92	0·62	18 14 25·0	53·5	8·8	9·2
24	9 15 26·37	10·84	0·62	17 52 50·0	54·5	8·9	9·3
25	9 19 45·52	10·76	0·62	17 30 52·2	55·4	8·9	9·3
26	9 24 2·73	10·68	0·63	17 8 32·3	56·3	9·0	9·4
27	9 28 17·98	10·60	0·63	16 45 51·0	57·1	9·1	9·5
28	9 32 31·28	10·51	0·64	16 22 49·2	58·0	9·2	9·6
29	9 36 42·62	10·43	0·64	15 59 27·6	58·8	9·3	9·7
30	9 40 52·01	10·35	0·65	15 35 46·8	59·6	9·4	9·8
31	9 44		0·65	N.15 11 47·6	−60·3	9·5	9·9

JULY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	9 44 27·15	N. 15 14 57·1	9·9398861	3 8·6	221 56 39·3	N. 1 52 13·6	9·859
2	9 48 32·85	14 50 42·7	·9358777	3 8·7	223 32 38·7	1 47 26·4	·859
3	9 52 36·60	14 26 11·3	·9318267	3 8·8	225 8 35·4	1 42 34·3	·859
4	9 56 38·41	14 1 23·6	·9277326	3 8·9	226 44 29·4	1 37 37·5	·85
5	10 0 38·27	13 36 20·3	·9235950	3 9·0	228 20 20·8	1 32 36·3	·85
6	10 4 36·19	13 11 2·1	·9194134	3 9·0	229 56 9·5	1 27 30·8	·85
7	10 8 32·17	12 45 29·6	·9151872	3 9·0	231 31 55·6	1 22 21·4	·85
8	10 12 26·21	12 19 43·6	·9109159	3 8·9	233 7 39·1	1 17 8·3	·86
9	10 16 18·31	11 53 44·8	·9065987	3 8·8	234 43 20·1	1 11 51·7	·86
10	10 20 8·47	11 27 33·9	·9022351	3 8·7	236 18 58·6	1 6 31·9	·86
11	10 23 56·68	11 1 11·6	·8978243	3 8·6	237 54 34·7	1 1 9·1	·86
12	10 27 42·95	10 34 38·6	·8933657	3 8·4	239 30 8·4	0 55 43·7	·86
13	10 31 27·26	10 7 55·7	·8888586	3 8·2	241 5 39·7	0 50 15·7	·86
14	10 35 9·61	9 41 3·5	·8843022	3 8·0	242 41 8·7	0 44 45·5	·86
15	10 38 49·99	9 14 2·8	·8796959	3 7·7	244 16 35·5	0 39 13·4	·86
16	10 42 28·38	8 46 54·4	·8750390	3 7·4	245 52 0·1	0 33 39·5	·86
17	10 46 4·77	8 19 39·0	·8703309	3 7·1	247 27 22·6	0 28 4·2	·86
18	10 49 39·15	7 52 17·3	·8655710	3 6·7	249 2 43·0	0 22 27·8	·86
19	10 53 11·49	7 24 50·1	·8607586	3 6·3	250 38 1·4	0 16 50·4	·86
20	10 56 41·77	6 57 18·1	·8558931	3 5·8	252 13 17·8	0 11 12·3	·86
21	11 0 9·97	6 29 42·1	·8509742	3 5·3	253 48 32·4	N. 0 5 33·8	·86
22	11 3 36·07	6 2 2·9	·8460012	3 4·8	255 23 45·1	S. 0 0 4·8	·86
23	11 7 0·04	5 34 21·3	·8409737	3 4·3	256 58 56·1	0 5 43·3	·86
24	11 10 21·86	5 6 38·0	·8358913	3 3·7	258 34 5·4	0 11 21·4	·86
25	11 13 41·50	4 38 53·8	·8307537	3 3·1	260 9 13·0	0 16 58·9	·86
26	11 16 58·93	4 11 9·4	·8255605	3 2·4	261 44 19·2	0 22 35·5	·86
27	11 20 14·11	3 43 25·6	·8203115	3 1·7	263 19 23·8	0 28 11·0	·86
28	11 23 27·01	3 15 43·2	·8150062	3 1·0	264 54 27·1	0 33 45·1	·86
29	11 26 37·60	2 48 2·9	·8096444	3 0·2	266 29 29·0	0 39 17·6	·86
30	11 29 45·84	2 20 25·4	·8042258	2 59·4	268 4 29·6	0 44 48·2	·86
31	11 32 51·69	1 52 51·5	·7987500	2 58·6	269 39 29·0	0 50 16·6	·86
32	11 35 55·11	N. 1 25 22·0	9·7932167	2 57·7	271 14 27·4	S. 0 55 42·7	9·86

JULY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right scension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
m s	s	s	° ′ ″	″	″	″
44 59·44	+10·27	0·65	N. 15 11 47·6	−60·3	9·5	9·9
49 4·91	10·19	0·65	14 47 30·8	61·0	9·5	9·9
53 8·42	10·10	0·66	14 22 57·1	61·7	9·6	10·0
57 9·99	10·02	0·67	13 58 7·3	62·4	9·7	10·1
1 9·60	9·94	0·67	13 33 1·9	63·0	9·8	10·2
5 7·27	9·86	0·67	13 7 41·8	63·6	9·9	10·3
9 2·99	9·78	0·67	12 42 7·5	64·2	10·0	10·4
12 56·77	9·70	0·68	12 16 19·8	64·8	10·1	10·5
16 48·60	9·62	0·69	11 50 19·5	65·3	10·2	10·6
20 38·49	9·54	0·70	11 24 7·1	65·8	10·3	10·7
24 26·43	9·46	0·70	10 57 43·5	66·2	10·4	10·8
28 12·41	9·38	0·71	10 31 9·4	66·6	10·6	11·0
31 56·43	9·29	0·72	10 4 25·4	67·0	10·7	11·1
35 38·49	9·21	0·72	9 37 32·4	67·4	10·8	11·2
39 18·57	9·13	0·73	9 10 31·0	67·7	10·9	11·3
42 56·66	9·05	0·74	8 43 22·0	68·0	11·1	11·5
46 32·74	8·97	0·75	8 16 6·1	68·3	11·2	11·6
50 6·79	8·88	0·76	7 48 44·0	68·5	11·3	11·7
53 38·80	8·79	0·76	7 21 16·6	68·7	11·4	11·8
57 8·75	8·70	0·77	6 53 44·6	68·9	11·5	12·0
0 36·61	8·62	0·77	6 26 8·7	69·1	11·6	12·1
4 2·37	8·53	0·78	5 58 29·7	69·2	11·7	12·2
7 25·99	8·44	0·79	5 30 48·5	69·3	11·8	12·3
10 47·45	8·35	0·80	5 3 5·7	69·3	12·0	12·5
14 6·73	8·26	0·81	4 35 22·2	69·3	12·1	12·6
17 23·78	8·16	0·82	4 7 38·6	69·3	12·3	12·8
20 38·58	8·07	0·83	3 39 55·7	69·3	12·5	13·0
23 51·10	7·97	0·85	3 12 14·4	69·2	12·7	13·2
27 1·29	7·88	0·86	2 44 35·2	69·1	12·8	13·3
30 9·13	7·78	0·87	2 16 59·1	69·0	13·0	13·5
[illegible]	7·68	0·88	1 49 26·7	68·8	13·2	13·7
		0·89	N. 1 21 58·8	−68·6	13·3	13·8

AUGUST, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	11 35 55·11	N. 1 25 22·0	9·7932167	2 57·7	271 14 27·4	S. 0 55 42·7
2	11 38 56·05	0 57 57·5	·7876256	2 56·8	272 49 24·7	1 1 6·1
3	11 41 54·45	0 30 38·9	·7819763	2 55·8	274 24 21·0	1 6 26·7
4	11 44 50·27	N. 0 3 26·9	·7762686	2 54·8	275 59 16·5	1 11 44·2
5	11 47 43·45	S. 0 23 37·8	·7705020	2 53·7	277 34 11·1	1 16 58·3
6	11 50 33·92	0 50 34·2	·7646761	2 52·6	279 9 5·0	1 22 8·9
7	11 53 21·61	1 17 21·7	·7587908	2 51·4	280 43 58·2	1 27 15·6
8	11 56 6·45	1 43 59·4	·7528457	2 50·2	282 18 50·8	1 32 18·3
9	11 58 48·35	2 10 26·3	·7468406	2 49·0	283 53 43·0	1 37 16·8
10	12 1 27·23	2 36 41·7	·7407752	2 47·7	285 28 34·6	1 42 10·7
11	12 4 2·99	3 2 44·5	·7346494	2 46·3	287 3 25·9	1 47 0·0
12	12 6 35·52	3 28 33·8	·7284633	2 44·9	288 38 16·8	1 51 44·3
13	12 9 4·72	3 54 8·6	·7222169	2 43·5	290 13 7·5	1 56 23·5
14	12 11 30·46	4 19 27·9	·7159105	2 42·0	291 47 58·0	2 0 57·3
15	12 13 52·62	4 44 30·6	·7095445	2 40·4	293 22 48·4	2 5 25·6
16	12 16 11·08	5 9 15·5	·7031195	2 38·7	294 57 38·7	2 9 48·1
17	12 18 25·68	5 33 41·5	·6966362	2 37·0	296 32 29·0	2 14 4·7
18	12 20 36·27	5 57 47·3	·6900958	2 35·3	298 7 19·3	2 18 15·1
19	12 22 42·71	6 21 31·7	·6834995	2 33·4	299 42 9·8	2 22 19·3
20	12 24 44·83	6 44 53·2	·6768490	2 31·5	301 17 0·5	2 26 16·9
21	12 26 42·45	7 7 50·6	·6701461	2 29·5	302 51 51·4	2 30 7·8
22	12 28 35·40	7 30 22·3	·6633931	2 27·5	304 26 42·6	2 33 51·9
23	12 30 23·51	7 52 26·9	·6565927	2 25·3	306 1 34·2	2 37 28·9
24	12 32 6·58	8 14 2·8	·6497478	2 23·1	307 36 26·3	2 40 58·8
25	12 33 44·42	8 35 8·5	·6428617	2 20·8	309 11 18·8	2 44 21·3
26	12 35 16·85	8 55 42·4	·6359384	2 18·4	310 46 11·8	2 47 36·3
27	12 36 43·67	9 15 42·6	·6289821	2 15·9	312 21 5·5	2 50 43·6
28	12 38 4·68	9 35 7·5	·6219976	2 13·3	313 55 59·7	2 53 43·2
29	12 39 19·67	9 53 55·1	·6149898	2 10·6	315 30 54·7	2 56 34·9
30	12 40 28·45	10 12 3·6	·6079644	2 7·8	317 5 50·3	2 59 18·2
31	12 41 30·81	10 29 30·9	·6009276	2 4·9	318 40 46·7	3 1 53
32	12 42 26·55	S. 10 46 14·9	9·5938860	2 1·8	320 15 43·9	S. 3 4 21

AUGUST, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
11 36 17·57	+ 7·57	0·89	N. 1 21 58·8	−68·6	13·3	13·8
11 39 18·08	7·46	0·90	0 54 36·1	68·4	13·5	14·0
11 42 16·05	7·36	0·91	0 27 19·3	68·1	13·6	14·1
11 45 11·43	7·25	0·92	N. 0 0 9·3	67·8	13·8	14·3
11 48 4·16	7·14	0·93	S. 0 26 53·2	67·4	13·9	14·5
11 50 54·16	7·02	0·94	0 53 47·4	67·1	14·1	14·7
11 53 41·38	6·91	0·95	1 20 32·5	66·7	14·4	15·0
11 56 25·74	6·79	0·96	1 47 7·6	66·3	14·6	15·2
11 59 7·15	6·66	0·98	2 13 31·8	65·8	14·7	15·3
12 1 45·53	6·53	0·99	2 39 44·3	65·3	14·9	15·5
12 4 20·77	6·40	1·00	3 5 44·2	64·7	15·1	15·7
12 6 52·78	6·26	1·02	3 31 30·4	64·1	15·3	15·9
12 9 21·44	6·12	1·03	3 57 1·9	63·5	15·6	16·2
12 11 46·63	5·97	1·05	4 22 17·8	62·8	15·9	16·5
12 14 8·23	5·81	1·07	4 47 16·9	62·1	16·1	16·7
12 16 26·10	5·66	1·08	5 11 58·1	61·3	16·4	17·0
12 18 40·11	5·50	1·10	5 36 20·2	60·5	16·6	17·3
12 20 50·11	5·33	1·12	6 0 22·0	59·6	16·8	17·5
12 22 55·93	5·15	1·14	6 24 2·2	58·7	17·1	17·8
12 24 57·42	4·97	1·16	6 47 19·3	57·7	17·4	18·1
12 26 54·40	4·78	1·18	7 10 12·1	56·7	17·7	18·4
12 28 46·70	4·58	1·20	7 32 39·2	55·6	18·0	18·7
12 30 34·15	4·37	1·22	7 54 39·0	54·4	18·3	19·0
12 32 16·54	4·16	1·24	8 16 10·0	53·2	18·6	19·3
12 33 53·71	3·94	1·27	8 37 10·6	51·9	18·9	19·6
12 35 25·45	3·71	1·29	8 57 39·2	50·5	19·1	19·9
12 36 51·57	3·47	1·31	9 17 34·0	49·0	19·4	20·2
12 38 11·88	3·23	1·33	9 36 53·4	47·5	19·7	20·5
12 39 26·17	2·97	1·35	9 55 35·5	45·9	20·0	20·8
[illegible]	2·70	1·38	10 13 38·2	44·2	20·4	21·2
	2·43	1·40	10 30 59·7	42·5	20·7	21·5
	·5	1·43	S. 10 47 37·8	−40·6	21·1	21·9

SEPTEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*N*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	12 42 26·55	S. 10 46 14·9	9·5938860	2 1·8	320 15 43·9	S. 3 4 21·0	9·86
2	12 43 15·46	11 2 13·4	·5868472	1 58·7	321 50 41·9	3 6 39·7	·86
3	12 43 57·34	11 17 24·4	·5798191	1 55·5	323 25 40·8	3 8 49·9	·86
4	12 44 32·01	11 31 45·3	·5728103	1 52·1	325 0 40·6	3 10 51·5	·86
5	12 44 59·26	11 45 13·8	·5658302	1 48·6	326 35 41·4	3 12 44·4	·86
6	12 45 18·94	11 57 47·2	·5588887	1 45·0	328 10 43·1	3 14 28·4	·86
7	12 45 30·86	12 9 23·1	·5519968	1 41·3	329 45 45·8	3 16 3·6	·86
8	12 45 34·87	12 19 58·6	·5451668	1 37·4	331 20 49·6	3 17 29·8	·86
9	12 45 30·83	12 29 31·1	·5384120	1 33·4	332 55 54·5	3 18 47·0	·86
10	12 45 18·63	12 37 57·7	·5317460	1 29·2	334 31 0·4	3 19 55·0	·86
11	12 44 58·17	12 45 15·7	·5251835	1 24·9	336 6 7·5	3 20 53·9	·86
12	12 44 29·38	12 51 22·1	·5187403	1 20·5	337 41 15·7	3 21 43·7	·86
13	12 43 52·26	12 56 14·0	·5124335	1 16·0	339 16 25·1	3 22 24·1	·86
14	12 43 6·81	12 59 49·0	·5062810	1 11·3	340 51 35·7	3 22 55·3	·86
15	12 42 13·10	13 2 4·5	·5003019	1 6·5	342 26 47·5	3 23 17·2	·86
16	12 41 11·23	13 2 58·0	·4945162	1 1·5	344 2 0·5	3 23 29·8	·86
17	12 40 1·37	13 2 27·0	·4889446	0 56·4	345 37 14·8	3 23 33·0	·86
18	12 38 43·75	13 0 29·8	·4836082	0 51·2	347 12 30·4	3 23 26·9	·86
19	12 37 18·68	12 57 5·2	·4785283	0 45·8	348 47 47·2	3 23 11·4	·86
20	12 35 46·52	12 52 12·1	·4737269	0 40·4	350 23 5·4	3 22 46·6	·86
21	12 34 7·69	12 45 49·8	·4692261	0 34·8	351 58 24·9	3 22 12·5	·86
22	12 32 22·71	12 37 58·3	·4650474	0 29·1	353 33 45·7	3 21 29·0	·86
23	12 30 32·15	12 28 38·5	·4612119	0 23·4	355 9 7·9	3 20 36·2	·86
24	12 28 36·65	12 17 51·8	·4577396	0 17·5	356 44 31·4	3 19 34·2	·86
25	12 26 36·92	12 5 40·2	·4546492	0 11·6	358 19 56·3	3 18 22·9	·86
26	12 24 33·70	11 52 6·7	·4519582	{0 5·6 / 23 59·6}	359 55 22·6	3 17 2·5	·86
27	12 22 27·81	11 37 14·9	·4496818	23 53·6	1 30 50·3	3 15 33·0	·86
28	12 20 20·07	11 21 9·2	·4478328	23 47·5	3 6 19·4	3 13 54·3	·86
29	12 18 11·35	11 3 55·1	·4464212	23 41·5	4 41 50·0	3 12 6·8	·86
30	12 16 2·55	10 45 38·1	·4454553	23 35·4	6 17 22·0	3 10 10·3	·86
31	12 13 54·57	S. 10 26 24·6	9·4449404	23 29·4	7 52 55·4	S. 3 8 4·9	9·86

SEPTEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	12 42 30·96	+ 2·15	1·43	S. 10 47 37·8	— 40·6	21·1	21·9
2	12 43 19·18	1·87	1·45	11 3 30·4	38·7	21·5	22·3
3	12 44 0·39	1·57	1·47	11 18 35·3	36·7	21·7	22·6
4	12 44 34·40	1·26	1·50	11 32 50·2	34·6	22·1	23·0
5	12 45 1·01	0·95	1·53	11 46 12·5	32·3	22·5	23·4
6	12 45 20·07	0·63	1·55	11 58 39·9	30·0	22·8	23·7
7	12 45 31·40	+ 0·31	1·58	12 10 9·8	27·5	23·2	24·1
8	12 45 34·85	— 0·02	1·60	12 20 39·4	24·9	23·6	24·5
9	12 45 30·29	0·36	1·62	12 30 6·0	22·2	23·9	24·8
10	12 45 17·61	0·70	1·65	12 38 26·9	19·4	24·2	25·2
11	12 44 56·70	1·04	1·67	12 45 39·4	16·5	24·6	25·6
12	12 44 27·52	1·39	1·70	12 51 40·4	13·5	25·0	26·0
13	12 43 50·07	1·73	1·73	12 56 27·3	10·4	25·3	26·3
14	12 43 4·34	2·08	1·75	12 59 57·6	7·2	25·7	26·7
15	12 42 10·42	2·42	1·77	13 2 8·8	3·8	26·0	27·0
16	12 41 8·40	2·75	1·80	13 2 58·4	— 0·3	26·4	27·4
17	12 39 58·47	3·08	1·82	13 2 24·0	+ 3·2	26·7	27·8
18	12 38 40·85	3·39	1·84	13 0 24·0	6·8	27·0	28·1
19	12 37 15·85	3·69	1·87	12 56 57·2	10·5	27·4	28·5
20	12 35 43·84	3·97	1·89	12 52 2·6	14·2	27·7	28·8
21	12 34 5·22	4·24	1·91	12 45 39·4	17·8	28·0	29·1
22	12 32 20·52	4·48	1·93	12 37 47·8	21·5	28·3	29·4
23	12 30 30·31	4·69	1·94	12 28 28·7	25·1	28·5	29·6
24	12 28 35·22	4·88	1·96	12 17 43·4	28·7	28·8	29·9
25	12 26 35·94	5·04	1·97	12 5 33·9	32·1	29·0	30·1
26	12 24 33·21	5·17	1·98	11 52 3·2	35·3	29·1	30·3
27	12 22 27·84	5·26	1·99	11 37 15·0	38·5	29·3	30·5
28	{12 20 20·64 / 12 18 13·47}	{5·33 / 5·34}	{2·00 / 2·00}	{11 21 13·6 / 11 4 4·2}	{41·1 / 43·2}	{29·4 / 29·5}	{30·6 / 30·7}
29	12 16 4·21	5·33	2·01	10 45 52·6	46·7	29·6	30·8
30	··	5·28	2·01	10 26 44·8	48·9	29·6	30·8
		·9	2·00	S. 10 6 47·6	+ 50·8	29·6	30·8

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	12 13 54·57	S. 10 26 24·6	9·4449404	23 29·4	7 52 55·4	S. 3 8 4·9	9·8608
2	12 11 48·27	10 6 21·5	·4448787	23 23·4	9 28 30·3	3 5 50·8	·8608
3	12 9 44·51	9 45 36·2	·4452694	23 17·5	11 4 6·7	3 3 28·1	·8607
4	12 7 44·12	9 24 16·2	·4461092	23 11·6	12 39 44·5	3 0 56·8	·8606
5	12 5 47·88	9 2 29·4	·4473916	23 5·8	14 15 23·8	2 58 17·0	·8605
6	12 3 56·54	8 40 23·7	·4491075	23 0·1	15 51 4·7	2 55 29·0	·8605
7	12 2 10·79	8 18 7·0	·4512449	22 54·5	17 26 47·0	2 52 32·7	·8604
8	12 0 31·25	7 55 46·9	·4537907	22 49·1	19 2 30·8	2 49 28·4	·8603
9	11 58 58·48	7 33 30·9	·4567295	22 43·7	20 38 16·2	2 46 16·2	·8602
10	11 57 32·97	7 11 26·2	·4600447	22 38·5	22 14 3·1	2 42 56·1	·8601
11	11 56 15·16	6 49 39·8	·4637179	22 33·4	23 49 51·5	2 39 28·4	·8601
12	11 55 5·41	6 28 17·8	·4677297	22 28·4	25 25 41·5	2 35 53·2	·8600
13	11 54 4·03	6 7 26·1	·4720599	22 23·6	27 1 33·0	2 32 10·6	·8599
14	11 53 11·26	5 47 10·1	·4766879	22 19·0	28 37 26·2	2 28 20·9	·8598
15	11 52 27·27	5 27 35·0	·4815926	22 14·5	30 13 20·9	2 24 24·1	·8597
16	11 51 52·20	5 8 45·0	·4867536	22 10·1	31 49 17·2	2 20 20·6	·8597
17	11 51 26·14	4 50 44·0	·4921503	22 5·9	33 25 15·1	2 16 10·4	·8596
18	11 51 9·10	4 33 35·3	·4977622	22 1·8	35 1 14·6	2 11 53·7	·8595
19	11 51 1·06	4 17 21·9	·5035693	21 57·8	36 37 15·8	2 7 30·8	·8594
20	11 51 1·99	4 2 6·1	·5095524	21 54·0	38 13 18·6	2 3 1·8	·8593
21	11 51 11·79	3 47 49·8	·5156930	21 50·4	39 49 23·1	1 58 26·9	·8593
22	11 51 30·39	3 34 34·8	·5219729	21 46·9	41 25 29·2	1 53 46·4	·8592
23	11 51 57·65	3 22 22·3	·5283748	21 43·6	43 1 37·0	1 49 0·4	·8591
24	11 52 33·39	3 11 13·2	·5348823	21 40·4	44 37 46·4	1 44 9·2	·8590
25	11 53 17·42	3 1 7·9	·5414802	21 37·3	46 13 57·6	1 39 13·1	·8589
26	11 54 9·56	2 52 6·6	·5481539	21 34·3	47 50 10·4	1 34 12·1	·8588
27	11 55 9·62	2 44 9·3	·5548899	21 31·5	49 26 24·9	1 29 6·6	·8588
28	11 56 17·36	2 37 15·7	·5616751	21 28·8	51 2 41·1	1 23 56·8	·8587
29	11 57 32·56	2 31 25·2	·5684975	21 26·2	52 38 59·1	1 18 42·9	·8586
30	11 58 54·97	2 26 37·0	·5753466	21 23·8	54 15 18·7	1 13 25·2	·85
31	12 0 24·35	2 22 50·3	·5822127	21 21·4	55 51 40·2	1 8 4·0	·8
32	12 2 0·46	S. 2 20 4·0	9·5890864	21 19·2	57 28 3·3	S. 1 2 39·4	9·

OCTOBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
2 11 50·94	− 5·19	2·00	S. 10 6 47·6	+50·8	29·6	30·8
2 9 47·62	5·07	1·99	9 46 8·3	52·4	29·5	30·7
2 7 47·62	4·91	1·99	9 24 54·4	53·6	29·5	30·7
2 5 51·71	4·72	1·98	9 3 13·7	54·6	29·4	30·6
2 4 0·63	4·51	1·97	8 41 13·8	55·2	29·3	30·5
2 2 15·07	4·27	1·97	8 19 2·7	55·5	29·2	30·4
2 0 35·63	4·00	1·96	7 56 47·8	55·5	29·1	30·2
1 59 2·88	3·71	1·95	7 34 36·5	55·3	28·9	30·0
1 57 37·31	3·41	1·93	7 12 36·0	54·7	28·7	29·8
1 56 19·35	3·08	1·91	6 50 53·1	53·8	28·4	29·5
1 55 9·37	2·74	1·89	6 29 34·1	52·7	28·2	29·3
1 54 7·68	2·39	1·87	6 8 44·7	51·4	27·9	29·0
1 53 14·52	2·03	1·85	5 48 30·3	49·8	27·6	28·7
1 52 30·07	1·67	1·83	5 28 56·0	48·0	27·3	28·4
1 51 54·47	1·30	1·81	5 10 6·2	46·1	26·9	28·0
1 51 27·82	0·92	1·78	4 52 4·7	44·0	26·6	27·7
1 51 10·13	0·55	1·76	4 34 54·8	41·8	26·3	27·3
1 51 1·39	− 0·18	1·73	4 18 39·6	39·4	25·9	26·9
1 51 1·57	+ 0·19	1·70	4 3 21·5	37·0	25·5	26·5
1 51 10·58	0·56	1·68	3 49 2·3	34·5	25·2	26·2
1 51 28·36	0·92	1·65	3 35 43·8	32·0	24·8	25·8
1 51 54·77	1·28	1·63	3 23 27·4	29·4	24·5	25·5
1 52 29·64	1·63	1·61	3 12 13·9	26·7	24·1	25·1
1 53 12·79	1·97	1·59	3 2 3·8	24·0	23·9	24·8
1 54 4·04	2·30	1·56	2 52 57·4	21·4	23·5	24·4
1 55 3·19	2·62	1·54	2 44 54·7	18·8	23·1	24·0
1 56 10·02	2·94	1·51	2 37 55·4	16·2	22·7	23·6
1 57 24·32	3·25	1·49	2 31 59·0	13·6	22·3	23·2
1 58 45·83	3·54	1·46	2 27 4·8	11·0	21·9	22·8
2 0 14·32	3·82	1·44	2 23 11·9	8·5	21·6	22·5
2	4·10	1·42	2 20 19·4	6·0	21·3	22·1
2	−	1·40	S. 2 18 26·2	+ 3·5	21·0	21·8

NOVEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	12 2 0·46	S. 2 20 4·0	9·5890864	21 19·2	57 28 3·3	S. 1 2 39·4
2	12 3 43·07	2 18 17·1	·5959591	21 17·1	59 4 28·3	0 57 11·8
3	12 5 31·94	2 17 28·1	·6028234	21 15·0	60 40 55·0	0 51 41·3
4	12 7 26·80	2 17 35·6	·6096726	21 13·1	62 17 23·5	0 46 8·3
5	12 9 27·45	2 18 38·3	·6165005	21 11·2	63 53 53·8	0 40 33·0
6	12 11 33·66	2 20 34·7	·6233017	21 9·4	65 30 25·9	0 34 55·6
7	12 13 45·20	2 23 23·2	·6300713	21 7·8	67 6 59·8	0 29 16·5
8	12 16 1·85	2 27 2·3	·6368049	21 6·2	68 43 35·5	0 23 35·9
9	12 18 23·40	2 31 30·4	·6434991	21 4·7	70 20 12·9	0 17 54·0
10	12 20 49·67	2 36 46·0	·6501507	21 3·2	71 56 52·2	0 12 11·2
11	12 23 20·47	2 42 47·6	·6567568	21 1·9	73 33 33·3	0 6 27·7
12	12 25 55·60	2 49 33·6	·6633155	21 0·6	75 10 16·2	S. 0 0 43·7
13	12 28 34·91	2 57 2·5	·6698245	20 59·4	76 47 0·8	N. 0 5 0·4
14	12 31 18·24	3 5 12·9	·6762820	20 58·2	78 23 47·3	0 10 44·3
15	12 34 5·42	3 14 3·3	·6826865	20 57·1	80 0 35·6	0 16 27·9
16	12 36 56·32	3 23 32·4	·6890368	20 56·1	81 37 25·6	0 22 10·8
17	12 39 50·80	3 33 38·6	·6953318	20 55·1	83 14 17·4	0 27 52·6
18	12 42 48·74	3 44 20·6	·7015706	20 54·2	84 51 10·9	0 33 33·2
19	12 45 50·02	3 55 36·9	·7077523	20 53·3	86 28 6·2	0 39 12·3
20	12 48 54·52	4 7 26·2	·7138765	20 52·5	88 5 3·2	0 44 49·7
21	12 52 2·14	4 19 47·2	·7199425	20 51·7	89 42 2·0	0 50 25·1
22	12 55 12·78	4 32 38·5	·7259498	20 51·0	91 19 2·4	0 55 58·1
23	12 58 26·35	4 45 59·0	·7318978	20 50·3	92 56 4·5	1 1 28·4
24	13 1 42·75	4 59 47·4	·7377863	20 49·7	94 33 8·3	1 6 55·9
25	13 5 1·90	5 14 2·3	·7436151	20 49·1	96 10 13·7	1 12 20·3
26	13 8 23·72	5 28 42·4	·7493838	20 48·5	97 47 20·7	1 17 41·2
27	13 11 48·13	5 43 46·5	·7550924	20 48·0	99 24 29·3	1 22 58·5
28	13 15 15·06	5 59 13·2	·7607408	20 47·6	101 1 39·4	1 28 11·9
29	13 18 44·43	6 15 1·3	·7663290	20 47·2	102 38 51·1	1 33 21·2
30	13 22 16·18	6 31 9·5	·7718573	20 46·8	104 16 4·2	1 38 26·0
31	13 25 50·25	S. 6 47 36·5	9·7773256	20 46·4	105 53 18·8	N. 1 43 26·

NOVEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
2 3 31·29	+ 4·37	1·40	S. 2 18 26·2	+ 3·5	21·0	21·8
2 5 19·31	4·62	1·38	2 17 30·8	+ 1·1	20·7	21·5
2 7 13·34	4·87	1·35	2 17 31·9	− 1·2	20·3	21·1
2 9 13·17	5·11	1·33	2 18 28·2	3·5	20·0	20·8
2 11 18·59	5·34	1·31	2 20 18·3	5·7	19·7	20·5
2 13 29·35	5·55	1·29	2 23 0·5	7·8	19·3	20·1
2 15 45·24	5·76	1·27	2 26 33·4	9·9	19·0	19·8
2 18 6·06	5·96	1·25	2 30 55·4	11·9	18·8	19·5
2 20 31·62	6·16	1·23	2 36 5·1	13·9	18·5	19·2
2 23 1·72	6·34	1·21	2 42 0·8	15·8	18·2	18·9
2 25 36·18	6·52	1·19	2 48 41·0	17·6	17·9	18·6
2 28 14·84	6·69	1·18	2 56 4·2	19·3	17·6	18·3
2 30 57·53	6·86	1·16	3 4 9·1	21·0	17·3	18·0
2 33 44·10	7·02	1·15	3 12 54·2	22·7	17·1	17·8
2 36 34·41	7·17	1·13	3 22 18·0	24·3	16·8	17·5
2 39 28·32	7·32	1·12	3 32 19·1	25·8	16·6	17·3
2 42 25·71	7·46	1·10	3 42 56·2	27·3	16·5	17·1
2 45 26·44	7·60	1·09	3 54 7·7	28·7	16·3	16·9
2 48 30·42	7·73	1·07	4 5 52·4	30·0	16·0	16·6
2 51 37·54	7·86	1·05	4 18 8·9	31·3	15·8	16·4
2 54 47·69	7·98	1·03	4 30 56·0	32·6	15·5	16·1
2 58 0·78	8·10	1·01	4 44 12·3	33·8	15·3	15·9
3 1 16·72	8·22	1·00	4 57 56·7	34·9	15·1	15·7
3 4 35·43	8·34	0·99	5 12 7·8	36·0	14·9	15·5
3 7 56·82	8·45	0·98	5 26 44·3	37·0	14·8	15·4
3 11 20·80	8·56	0·97	5 41 44·9	38·0	14·6	15·2
3 14 47·33	8·66	0·96	5 57 8·4	38·9	14·4	15·0
3 18 16·31	8·76	0·95	6 12 53·4	39·8	14·2	14·8
3 21 47·69	8·86	0·94	6 28 58·7	40·6	14·0	14·6
3 25 21·39	8·96	0·93	6 45 23·0	41·4	13·9	14·4
27	+ 9·05	0·92	S. 7 2 5·0	−42·1	13·7	14·2

DECEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″
1	13 25 50·25	S. 6 47 36·5	9·7773256	20 46·4	105 53 18·8	N. 1 43 26·1
2	13 29 26·58	7 4 21·1	·7827344	20 46·1	107 30 34·8	1 48 21·4
3	13 33 5·11	7 21 22·0	·7880838	20 45·9	109 7 52·1	1 53 11·4
4	13 36 45·79	7 38 37·9	·7933743	20 45·6	110 45 10·7	1 57 56·1
5	13 40 28·56	7 56 7·8	·7986062	20 45·4	112 22 30·6	2 2 35·2
6	13 44 13·38	8 13 50·3	·8037800	20 45·3	113 59 51·7	2 7 8·4
7	13 48 0·20	8 31 44·4	·8088964	20 45·1	115 37 14·0	2 11 35·5
8	13 51 48·99	8 49 48·7	·8139561	20 45·0	117 14 37·4	2 15 56·3
9	13 55 39·69	9 8 2·1	·8189597	20 45·0	118 52 1·8	2 20 10·6
10	13 59 32·28	9 26 23·5	·8239081	20 44·9	120 29 27·2	2 24 18·2
11	14 3 26·73	9 44 51·8	·8288020	20 44·9	122 6 53·6	2 28 18·8
12	14 7 23·01	10 3 25·8	·8336422	20 44·9	123 44 20·8	2 32 12·3
13	14 11 21·10	10 22 4·6	·8384295	20 45·0	125 21 48·8	2 35 58·5
14	14 15 20·97	10 40 47·0	·8431647	20 45·1	126 59 17·6	2 39 37·2
15	14 19 22·61	10 59 32·0	·8478486	20 45·2	128 36 47·0	2 43 8·1
16	14 23 26·00	11 18 18·5	·8524819	20 45·3	130 14 17·0	2 46 31·2
17	14 27 31·13	11 37 5·6	·8570653	20 45·5	131 51 47·6	2 49 46·3
18	14 31 37·99	11 55 52·2	·8615996	20 45·7	133 29 18·6	2 52 53·2
19	14 35 46·57	12 14 37·4	·8660855	20 45·9	135 6 50·0	2 55 51·8
20	14 39 56·85	12 33 20·2	·8705235	20 46·1	136 44 21·6	2 58 41·9
21	14 44 8·83	12 51 59·5	·8749142	20 46·4	138 21 53·5	3 1 23·4
22	14 48 22·50	13 10 34·4	·8792582	20 46·8	139 59 25·5	3 3 56·1
23	14 52 37·85	13 29 3·9	·8835560	20 47·1	141 36 57·6	3 6 20·0
24	14 56 54·87	13 47 27·0	·8878081	20 47·5	143 14 29·6	3 8 34·9
25	15 1 13·56	14 5 42·8	·8920150	20 47·8	144 52 1·5	3 10 40·6
26	15 5 33·91	14 23 50·3	·8961771	20 48·3	146 29 33·2	3 12 37·2
27	15 9 55·90	14 41 48·4	·9002948	20 48·7	148 7 4·6	3 14 24·5
28	15 14 19·53	14 59 36·3	·9043686	20 49·2	149 44 35·6	3 16 2·4
29	15 18 44·79	15 17 12·9	·9083989	20 49·7	151 22 6·1	3 17 30·8
30	15 23 11·66	15 34 37·3	·9123861	20 50·2	152 59 36·1	3 18 49·7
31	15 27 40·14	15 51 48·5	·9163306	20 50·8	154 37 5·4	3 19 59·0
32	15 32 10·19	S. 16 8 45·5	9·9202330	20 51·4	156 14 33·9	N. 3 20 58·7

DECEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	Apparent Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
m s	s	s	° ′ ″	″	″	″
28 57·37	+ 9·05	0·92	S. 7 2 5·0	−42·1	13·7	14·2
32 35·56	9·14	0·91	7 19 3·6	42·8	13·5	14·0
36 15·91	9·23	0·90	7 36 17·4	43·4	13·4	13·9
39 58·37	9·32	0·89	7 53 45·3	43·9	13·2	13·7
43 42·88	9·40	0·88	8 11 26·0	44·4	13·0	13·5
47 29·41	9·48	0·87	8 29 18·4	44·9	12·9	13·4
51 17·91	9·56	0·86	8 47 21·3	45·3	12·7	13·2
55 8·34	9·64	0·85	9 5 33·5	45·7	12·6	13·1
59 0·67	9·72	0·84	9 23 53·9	46·0	12·4	12·9
2 54·86	9·80	0·83	9 42 21·3	46·3	12·3	12·8
6 50·89	9·87	0·82	10 0 54·6	46·5	12·1	12·6
10 48·74	9·95	0·81	10 19 32·8	46·6	12·0	12·5
14 48·38	10·02	0·80	10 38 14·8	46·8	11·9	12·4
18 49·79	10·10	0·80	10 56 59·5	46·9	11·7	12·2
22 52·97	10·17	0·79	11 15 46·0	47·0	11·6	12·1
26 57·88	10·24	0·78	11 34 33·2	47·0	11·5	12·0
31 4·54	10·31	0·77	11 53 20·1	46·9	11·4	11·8
35 12·92	10·39	0·76	12 12 5·7	46·8	11·3	11·7
39 23·01	10·46	0·76	12 30 49·0	46·7	11·2	11·6
43 34·81	10·53	0·75	12 49 29·0	46·6	11·1	11·5
47 48·30	10·60	0·74	13 8 4·8	46·4	10·9	11·3
52 3·48	10·67	0·74	13 26 35·3	46·2	10·8	11·2
56 20·34	10·74	0·73	13 44 59·6	45·9	10·7	11·1
0 38·87	10·81	0·73	14 3 16·7	45·6	10·6	11·0
4 59·07	10·88	0·72	14 21 25·7	45·2	10·5	10·9
9 20·92	10·95	0·72	14 39 25·4	44·8	10·4	10·8
13 44·42	11·01	0·71	14 57 15·0	44·3	10·3	10·7
18 9·55	11·08	0·71	15 14 53·6	43·8	10·2	10·6
22 36·30	11·15	0·70	15 32 20·0	43·3	10·1	10·5
27 4·66	11·22	0·69	15 49 33·3	42·8	10·0	10·4
31 34·61	11·28	0·69	16 6 32·7	42 2	9·9	10·3
36 6·		68	S. 16 23 17·1	−41·5	9·8	10·2

JANUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentr	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′
1	20 20 28·08	S. 20 43 0·8	0·3516797	1 38·1	317 58 54·3	S. 1 51 6
2	20 23 44·14	20 32 1·2	·3520954	1 37·5	318 36 46·9	1 51 6
3	20 26 59·82	20 20 47·9	·3525092	1 36·8	319 14 40·6	1 51 5
4	20 30 15·10	20 9 21·1	·3529212	1 36·1	319 52 35·3	1 51 3
5	20 33 29·99	19 57 40·9	·3533314	1 35·4	320 30 31·0	1 51 1
6	20 36 44·48	19 45 47·5	·3537398	1 34·7	321 8 27·7	1 50 58
7	20 39 58·56	19 33 41·1	·3541465	1 34·0	321 46 25·2	1 50 54
8	20 43 12·23	19 21 21·8	·3545513	1 33·3	322 24 23·6	1 50 49
9	20 46 25·49	19 8 49·8	·3549544	1 32·6	323 2 22·9	1 50 44
10	20 49 38·33	18 56 5·3	·3553557	1 31·8	323 40 22·9	1 50 37
11	20 52 50·75	18 43 8·4	·3557552	1 31·1	324 18 23·7	1 50 30
12	20 56 2·75	18 29 59·3	·3561529	1 30·3	324 56 25·1	1 50 22
13	20 59 14·32	18 16 38·3	·3565487	1 29·6	325 34 27·1	1 50 13
14	21 2 25·45	18 3 5·4	·3569426	1 28·8	326 12 29·7	1 50 4
15	21 5 36·14	17 49 21·0	·3573346	1 28·1	326 50 32·9	1 49 53
16	21 8 46·40	17 35 25·2	·3577245	1 27·3	327 28 36·5	1 49 42
17	21 11 56·21	17 21 18·1	·3581125	1 26·5	328 6 40·6	1 49 30
18	21 15 5·57	17 7 0·1	·3584985	1 25·7	328 44 45·0	1 49 17
19	21 18 14·49	16 52 31·3	·3588826	1 24·9	329 22 49·7	1 49 3
20	21 21 22·95	16 37 51·9	·3592647	1 24·1	330 0 54·8	1 48 49
21	21 24 30·96	16 23 2·1	·3596449	1 23·3	330 39 0·1	1 48 33
22	21 27 38·51	16 8 2·2	·3600231	1 22·5	331 17 5·6	1 48 17
23	21 30 45·60	15 52 52·3	·3603994	1 21·7	331 55 11·2	1 48 0
24	21 33 52·24	15 37 32·6	·3607740	1 20·9	332 33 16·9	1 47 43
25	21 36 58·42	15 22 3·5	·3611468	1 20·0	333 11 22·7	1 47 24
26	21 40 4·14	15 6 25·0	·3615179	1 19·2	333 49 28·5	1 47 5
27	21 43 9·40	14 50 37·5	·3618873	1 18·3	334 27 34·2	1 46 45
28	21 46 14·21	14 34 41·1	·3622552	1 17·5	335 5 39·8	1 46 24
29	21 49 18·56	14 18 36·1	·3626216	1 16·6	335 43 45·2	1 46
30	21 52 22·47	14 2 22·6	·3629865	1 15·7	336 21 50·5	
31	21 55 25·93	13 46 0·8	·3633500	1 14·8	336 59 55·	
32	21 58 28·95	S. 13 29 31·0	0·3637122	1 13·9	337	

JANUARY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
20 20 41·45	+ 8·17	0·15	S. 20 42 16·3	+27·2	2·0	3·8
20 23 57·40	8·16	0·15	20 31 16·1	27·8	2·0	3·8
20 27 12·96	8·14	0·14	20 20 2·2	28·3	2·0	3·8
20 30 28·12	8·12	0·14	20 8 34·8	28·9	2·0	3·8
20 33 42·89	8·11	0·14	19 56 54·1	29·5	2·0	3·8
20 36 57·26	8·09	0·14	19 45 0·2	30·0	2·0	3·8
20 40 11·22	8·07	0·14	19 32 53·2	30·6	2·0	3·8
20 43 24·76	8·06	0·14	19 20 33·4	31·1	2·0	3·8
20 46 37·89	8·04	0·14	19 8 1·0	31·6	2·0	3·8
20 49 50·61	8·02	0·14	18 55 16·1	32·1	2·0	3·8
20 53 2·91	8·00	0·14	18 42 18·8	32·6	2·0	3·8
20 56 14·78	7·99	0·14	18 29 9·4	33·1	2·0	3·8
20 59 26·22	7·97	0·14	18 15 48·0	33·6	2·0	3·8
21 2 37·22	7·95	0·14	18 2 14·9	34·1	2·0	3·8
21 5 47·79	7·93	0·14	17 48 30·2	34·6	2·0	3·8
21 8 57·91	7·91	0·14	17 34 34·1	35·1	2·0	3·8
21 12 7·60	7·89	0·14	17 20 26·9	35·5	2·0	3·8
21 15 16·83	7·88	0·14	17 6 8·7	36·0	2·0	3·8
21 18 25·62	7·86	0·14	16 51 39·7	36·4	2·0	3·8
21 21 33·95	7·84	0·14	16 37 0·2	36·9	2·0	3·8
21 24 41·83	7·82	0·13	16 22 10·3	37·3	1·9	3·7
21 27 49·24	7·80	0·13	16 7 10·3	37·7	1·9	3·7
21 30 56·20	7·78	0·13	15 52 0·3	38·1	1·9	3·7
21 34 2·70	7·76	0·13	15 36 40·7	38·5	1·9	3·7
21 37 8·74	7·74	0·13	15 21 11·6	38·9	1·9	3·7
21 40 14·33	7·72	0·13	15 5 33·2	39·3	1·9	3·7
21 43 19·46	7·70	0·13	14 49 45·7	39·7	1·9	3·7
21 46 24·13	7·68	0·13	14 33 49·4	40·0	1·9	3·7
21 49 28·35	7·67	0·13	14 17 44·5	40·4	1·9	3·7
21 52 32·12	7·65	0·13	14 1 31·1	40·7	1·9	3·7
21 55 35·45	7·63	0·13	13 45 9·5	41·1	1·9	3·7
·33	+ 7·61	0·13	S. 13 28 39·9	+41·4	1·9	3·7

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentr	
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′
1	21 58 28·95	S. 13 29 31·0	0·3637122	1 13·9	337 38 0·2	S. 1 44 53
2	22 1 31·53	13 12 53·3	·3640730	1 13·0	338 16 4·6	1 44 28
3	22 4 33·68	12 56 8·0	·3644326	1 12·1	338 54 8·6	1 44 3
4	22 7 35·41	12 39 15·3	·3647910	1 11·2	339 32 12·1	1 43 37
5	22 10 36·72	12 22 15·4	·3651480	1 10·3	340 10 15·2	1 43 10
6	22 13 37·61	12 5 8·5	·3655036	1 9·4	340 48 17·7	1 42 42
7	22 16 38·10	11 47 54·7	·3658579	1 8·4	341 26 19·7	1 42 13
8	22 19 38·18	11 30 34·3	·3662108	1 7·5	342 4 21·0	1 41 44
9	22 22 37·87	11 13 7·5	·3665624	1 6·5	342 42 21·7	1 41 14
10	22 25 37·18	10 55 34·4	·3669125	1 5·6	343 20 21·6	1 40 43
11	22 28 36·10	10 37 55·4	·3672609	1 4·6	343 58 20·8	1 40 12
12	22 31 34·64	10 20 10·6	·3676077	1 3·7	344 36 19·2	1 39 40
13	22 34 32·80	10 2 20·2	·3679527	1 2·7	345 14 16·7	1 39 7
14	22 37 30·60	9 44 24·5	·3682960	1 1·7	345 52 13·3	1 38 33
15	22 40 28·04	9 26 23·6	·3686375	1 0·7	346 30 9·0	1 37 59
16	22 43 25·12	9 8 17·8	·3689772	0 59·7	347 8 3 6	1 37 24
17	22 46 21·84	8 50 7·4	·3693151	0 58·7	347 45 57·2	1 36 48
18	22 49 18·21	8 31 52·4	·3696511	0 57·7	348 23 49·7	1 36 12
19	22 52 14·24	8 13 33·2	·3699853	0 56·7	349 1 41·1	1 35 35
20	22 55 9·94	7 55 9·9	·3703176	0 55·7	349 39 31·3	1 34 57
21	22 58 5·30	7 36 42·8	·3706479	0 54·7	350 17 20·3	1 34 19
22	23 1 0·34	7 18 12·1	·3709764	0 53·7	350 55 8·0	1 33 40
23	23 3 55·06	6 59 38·0	·3713032	0 52·6	351 32 54·4	1 33 0
24	23 6 49·46	6 41 0·7	·3716282	0 51·6	352 10 39·4	1 32 20
25	23 9 43·56	6 22 20·4	·3719514	0 50·6	352 48 23·1	1 31 39
26	23 12 37·36	6 3 37·4	·3722729	0 49·5	353 26 5·3	1 30 57
27	23 15 30·87	5 44 51·8	·3725928	0 48·5	354 3 46·0	1 30 15
28	23 18 24·10	5 26 3·8	·3729112	0 47·4	354 41 25·2	1 29 32
29	23 21 17·06	S. 5 7 13·7	0·3732279	0 46·4	355 19 2·7	S. 1 28 48

FEBRUARY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
21 58 38·33	+ 7·61	0·13	S. 13 28 39·9	+41·4	1·9	3·7
22 1 40·78	7·59	0·13	13 12 2·5	41·7	1·9	3·7
22 4 42·79	7·58	0·13	12 55 17·5	42·0	1·9	3·7
22 7 44·38	7·56	0·13	12 38 25·1	42·3	1·9	3·7
22 10 45·55	7·54	0·13	12 21 25·5	42·6	1·9	3·7
22 13 46·31	7·52	0·13	12 4 18·8	42·9	1·9	3·7
22 16 46·66	7·51	0·13	11 47 5·4	43·2	1·9	3·7
22 19 46·61	7·49	0·13	11 29 45·4	43·5	1·9	3·7
22 22 46·17	7·47	0·13	11 12 18·9	43·7	1·9	3·7
22 25 45·34	7·46	0·13	10 54 46·3	44·0	1·9	3·7
22 28 44·12	7·44	0·13	10 37 7·7	44·2	1·9	3·7
22 31 42·52	7·43	0·13	10 19 23·4	44·5	1·9	3·7
22 34 40·55	7·41	0·13	10 1 33·5	44·7	1·9	3·7
22 37 38·21	7·40	0·13	9 43 38·3	44·9	1·9	3·7
22 40 35·51	7·38	0·13	9 25 37·9	45·1	1·9	3·7
22 43 32·45	7·37	0·13	9 7 32·7	45·3	1·9	3·7
22 46 29·04	7·35	0·13	8 49 22·8	45·5	1·9	3·7
22 49 25·28	7·34	0·13	8 31 8·4	45·7	1·9	3·7
22 52 21·17	7·32	0·13	8 12 49·8	45·9	1·9	3·7
22 55 16·73	7·31	0·13	7 54 27·1	46·0	1·9	3·7
22 58 11·95	7·29	0·13	7 36 0·7	46·2	1·9	3·7
23 1 6·85	7·28	0·13	7 17 30·7	46·3	1·9	3·7
23 4 1·43	7·27	0·13	6 58 57·2	46·5	1·9	3·6
23 6 55·70	7·26	0·13	6 40 20·6	46·6	1·9	3·6
23 9 49·67	7·24	0·13	6 21 41·0	46·7	1·9	3·6
23 12 43·33	7·23	0·13	6 2 58·7	46·8	1·9	3·6
23 15 36·70	7·22	0·13	5 44 13·9	46·9	1·9	3·6
23 18 29·80	7·21	0·13	5 25 26·7	47·0	1·9	3·6
23 21 22·[illegible]		0·13	S. 5 6 37·3	+47·1	1·9	3·6

MARCH, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	23 21 17·06	S. 5 7 13·7	0·3732279	0 46·4	355 19 2·7	S. 1 28 48·8	0·1430
2	23 24 9·75	4 48 21·6	·3735430	0 45·3	355 56 38·7	1 28 4·7	·1432
3	23 27 2·19	4 29 27·7	·3738565	0 44·2	356 34 13·1	1 27 20·0	·1433
4	23 29 54·39	4 10 32·2	·3741684	0 43·1	357 11 45·7	1 26 34·7	·1435
5	23 32 46·35	3 51 35·3	·3744788	0 42·1	357 49 16·6	1 25 48·8	·1437
6	23 35 38·09	3 32 37·2	·3747876	0 41·0	358 26 45·7	1 25 2·3	·1438
7	23 38 29·62	3 13 38·0	·3750946	0 39·9	359 4 13·0	1 24 15·3	·1440
8	23 41 20·94	2 54 37·9	·3753999	0 38·8	359 41 38·5	1 23 27·7	·1442
9	23 44 12·06	2 35 37·2	·3757033	0 37·7	0 19 2·1	1 22 39·5	·1444
10	23 47 3·00	2 16 36·0	·3760048	0 36·6	0 56 23·7	1 21 50·8	·1446
11	23 49 53·76	1 57 34·5	·3763044	0 35·5	1 33 43·4	1 21 1·6	·1447
12	23 52 44·35	1 38 32·8	·3766019	0 34·4	2 11 1·1	1 20 11·8	·1449
13	23 55 34·78	1 19 31·3	·3768972	0 33·4	2 48 16·7	1 19 21·5	·1451
14	23 58 25·06	1 0 30·0	·3771903	0 32·3	3 25 30·3	1 18 30·7	·1453
15	0 1 15·19	0 41 29·1	·3774812	0 31·1	4 2 41·7	1 17 39·4	·1455
16	0 4 5·18	0 22 28·9	·3777697	0 30·0	4 39 51·0	1 16 47·6	·1458
17	0 6 55·04	S. 0 3 29·5	·3780557	0 28·9	5 16 58·1	1 15 55·3	·1460
18	0 9 44·78	N. 0 15 28·9	·3783393	0 27·8	5 54 3·0	1 15 2·5	·1462
19	0 12 34·40	0 34 26·0	·3786204	0 26·7	6 31 5·6	1 14 9·2	·1464
20	0 15 23·91	0 53 21·7	·3788989	0 25·6	7 8 6·0	1 13 15·5	·1466
21	0 18 13·31	1 12 15·8	·3791749	0 24·5	7 45 4·0	1 12 21·4	·1469
22	0 21 2·61	1 31 8·1	·3794483	0 23·3	8 21 59·7	1 11 26·8	·1471
23	0 23 51·82	1 49 58·4	·3797191	0 22·2	8 58 53·0	1 10 31·8	·1473
24	0 26 40·95	2 8 46·5	·3799873	0 21·1	9 35 43·9	1 9 36·3	·1476
25	0 29 30·00	2 27 32·2	·3802529	0 20·0	10 12 32·3	1 8 40·5	·1478
26	0 32 18·98	2 46 15·3	·3805160	0 18·8	10 49 18·3	1 7 44·2	·1480
27	0 35 7·90	3 4 55·8	·3807766	0 17·7	11 26 1·7	1 6 47·5	·1483
28	0 37 56·76	3 23 33·3	·3810346	0 16·6	12 2 42·6	1 5 50·4	·1485
29	0 40 45·58	3 42 7·7	·3812902	0 15·5	12 39 20·9	1 4 53·0	·1488
30	0 43 34·37	4 0 38·9	·3815432	0 14·3	13 15 56·6	1 3 55·2	·1490
31	0 46 23·13	4 19 6·7	·3817937	0 13·2	13 52 29·7	1 2 57·0	·1493
32	0 49 11·87	N. 4 37 30·9	0·3820417	0 12·1	14 29 0·1	S. 1 1 58·4	0·1496

MARCH, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
23 21 22·62	+ 7·20	0·13	S. 5 6 37·3	+47·1	1·9	3·6
23 24 15·18	7·18	0·13	4 47 46·0	47·2	1·9	3·6
23 27 7·49	7·17	0·13	4 28 52·9	47·2	1·9	3·6
23 29 59·55	7·16	0·13	4 9 58·2	47·3	1·9	3·6
23 32 51·38	7·15	0·13	3 51 2·1	47·3	1·9	3·6
23 35 42·98	7·15	0·13	3 32 4·7	47·4	1·9	3·6
23 38 34·37	7·14	0·13	3 13 6·4	47·4	1·9	3·6
23 41 25·56	7·13	0·13	2 54 7·2	47·5	1·9	3·6
23 44 16·55	7·12	0·13	2 35 7·3	47·5	1·9	3·6
23 47 7·35	7·11	0·13	2 16 7·0	47·5	1·9	3·6
23 49 57·97	7·11	0·13	1 57 6·3	47·5	1·9	3·6
23 52 48·43	7·10	0·13	1 38 5·5	47·5	1·9	3·6
23 55 38·73	7·09	0·13	1 19 4·8	47·5	1·9	3·6
23 58 28·87	7·09	0·13	1 0 4·4	47·5	1·9	3·6
0 1 18·86	7·08	0·13	0 41 4·4	47·5	1·9	3·6
0 4 8·72	7·07	0·13	0 22 5·1	47·5	1·9	3·6
0 6 58·45	7·07	0·13	S. 0 3 6·6	47·4	1·9	3·6
0 9 48·05	7·06	0·13	N. 0 15 50·8	47·4	1·9	3·6
0 12 37·54	7·06	0·13	0 34 47·0	47·3	1·9	3·6
0 15 26·91	7·06	0·13	0 53 41·8	47·3	1·9	3·6
0 18 16·18	7·05	0·13	1 12 35·0	47·2	1·9	3·6
0 21 5·35	7·05	0·13	1 31 26·4	47·1	1·9	3·6
0 23 54·43	7·05	0·13	1 50 15·8	47·0	1·9	3·6
0 26 43·42	7·04	0·13	2 9 3·0	46·9	1·9	3·6
0 29 32·34	7·04	0·13	2 27 47·8	46·8	1·9	3·6
0 32 21·19	7·03	0·13	2 46 30·0	46·7	1·9	3·6
0 35 9·97	7·03	0·13	3 5 9·5	46·6	1·9	3·6
0 37 58·70	7·03	0·13	3 23 46·2	46·5	1·9	3·6
0 40 47·39	7·03	0·13	3 42 19·7	46·3	1·9	3·6
0 43 36·04	7·03	0·13	4 0 49·9	46·2	1·9	3·6
0 46 24·67	7·03	0·13	4 19 16·8	46·0	1·9	3·6
0 49 13·28	+ 7·03	0·13	N. 4 37 40·2	+45·9	1·9	3·6

APRIL, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	0 49 11·87	N. 4 37 30·9	0·3820417	0 12·1	14 29 0·1	S. 1 1 58·4	0·149
2	0 52 0·60	4 55 51·4	·3822871	0 10·9	15 5 27·8	1 0 59·5	·149
3	0 54 49·33	5 14 8·1	·3825299	0 9·8	15 41 52·8	1 0 0·3	·150
4	0 57 38·07	5 32 20·8	·3827701	0 8·7	16 18 15·0	0 59 0·7	·150
5	1 0 26·83	5 50 29·3	·3830077	0 7·5	16 54 34·5	0 58 0·8	·150
6	1 3 15·62	6 8 33·5	·3832424	0 6·4	17 30 51·2	0 57 0·6	·150
7	1 6 4·44	6 26 33·2	·3834742	0 5·3	18 7 5·1	0 56 0·1	·151
8	1 8 53·30	6 44 28·2	·3837031	0 4·2	18 43 16·1	0 54 59·3	·151
9	1 11 42·21	7 2 18·5	·3839289	0 3·0	19 19 24·2	0 53 58·2	·151
10	1 14 31·18	7 20 3·8	·3841516	0 1·9	19 55 29·5	0 52 56·9	·152
11	1 17 20·21	7 37 44·0	·3843710	{0 0·8 / 23 59·6}	20 31 31·8	0 51 55·3	·152
12	1 20 9·31	7 55 19·0	·3845870	23 58·5	21 7 31·2	0 50 53·4	·152
13	1 22 58·48	8 12 48·5	·3847996	23 57·4	21 43 27·6	0 49 51·3	·152
14	1 25 47·73	8 30 12·4	·3850087	23 56·3	22 19 21·1	0 48 48·9	·153
15	1 28 37·06	8 47 30·5	·3852142	23 55·2	22 55 11·6	0 47 46·3	·153
16	1 31 26·48	9 4 42·7	·3854159	23 54·0	23 30 59·1	0 46 43·5	·153
17	1 34 16·00	9 21 48·8	·3856138	23 52·9	24 6 43·5	0 45 40·4	·154
18	1 37 5·61	9 38 48·7	·3858080	23 51·8	24 42 24·9	0 44 37·2	·154
19	1 39 55·32	9 55 42·2	·3859984	23 50·7	25 18 3·2	0 43 33·8	·154
20	1 42 45·14	10 12 29·1	·3861849	23 49·6	25 53 38·4	0 42 30·1	·155
21	1 45 35·07	10 29 9·3	·3863676	23 48·5	26 29 10·6	0 41 26·3	·155
22	1 48 25·11	10 45 42·6	·3865464	23 47·4	27 4 39·6	0 40 22·3	·155
23	1 51 15·27	11 2 8·8	·3867213	23 46·3	27 40 5·4	0 39 18·2	·156
24	1 54 5·55	11 18 27·9	·3868924	23 45·2	28 15 28·1	0 38 13·9	·156
25	1 56 55·96	11 34 39·6	·3870596	23 44·1	28 50 47·7	0 37 9·4	·156
26	1 59 46·50	11 50 43·9	·3872229	23 43·0	29 26 4·0	0 36 4·8	·157
27	2 2 37·17	12 6 40·6	·3873823	23 41·9	30 1 17·2	0 35 0·1	·157
28	2 5 27·98	12 22 29·6	·3875379	23 40·8	30 36 27·2	0 33 55·2	·157
29	2 8 18·94	12 38 10·7	·3876896	23 39·7	31 11 33·9	0 32 50·3	·158
30	2 11 10·05	12 53 43·8	·3878374	23 38·6	31 46 37·4	0 31 45·2	·158
31	2 14 1·31	N. 13 9 8·9	0·3879812	23 37·5	32 21 37·7	S. 0 30 40·0	0·158

APRIL, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	0 49 13·28	+ 7·03	0·13	N. 4 37 40·2	+45·9	1·9	3·6
2	0 52 1·88	7·03	0·13	4 55 59·8	45·7	1·9	3·6
3	0 54 50·48	7·03	0·13	5 14 15·6	45·6	1·9	3·6
4	0 57 39·09	7·03	0·13	5 32 27·4	45·4	1·9	3·6
5	1 0 27·72	7·03	0·13	5 50 35·0	45·2	1·9	3·6
6	1 3 16·37	7·03	0·12	6 8 38·3	45·0	1·8	3·5
7	1 6 5·06	7·03	0·12	6 26 37·1	44·9	1·8	3·5
8	1 8 53·79	7·03	0·12	6 44 31·3	44·7	1·8	3·5
9	1 11 42·56	7·03	0·12	7 2 20·7	44·5	1·8	3·5
10	{1 14 31 40 / 1 17 30 30}	{7 ·04 / 7 ·04}	{0 ·12 / 0 ·12}	{7 20 5 ·2 / 7 37 44 ·6}	{44 ·2 / 44 ·0}	{1 ·8 / 1 ·8}	{3 ·5 / 3 ·5}
11	1 20 9·27	7·04	0·12	7 55 18·7	43·8	1·8	3·5
12	1 22 58·31	7·04	0·12	8 12 47·4	43·6	1·8	3·5
13	1 25 47·42	7·05	0·12	8 30 10·5	43·3	1·8	3·5
14	1 28 36·62	7·05	0·12	8 47 27·8	43·1	1·8	3·5
15	1 31 25·91	7·06	0·12	9 4 39·2	42·9	1·8	3·5
16	1 34 15·30	7·06	0·12	9 21 44·6	42·6	1·8	3·5
17	1 37 4·78	7·06	0·12	9 38 43·8	42·3	1·8	3·5
18	1 39 54·36	7·07	0·12	9 55 36·5	42·1	1·8	3·5
19	1 42 44·05	7·07	0·12	10 12 22·7	41·8	1·8	3·5
20	1 45 33·84	7·08	0·12	10 29 2·1	41·5	1·8	3·5
21	1 48 23·75	7·08	0·12	10 45 34·7	41·2	1·8	3·5
22	1 51 13·78	7·09	0·12	11 2 0·2	40·9	1·8	3·5
23	1 54 3·93	7·09	0·12	11 18 18·6	40·6	1·8	3·5
24	1 56 54·20	7·10	0·12	11 34 29·7	40·3	1·8	3·5
25	1 59 44·61	7·10	0·12	11 50 33·3	40·0	1·8	3·5
26	2 2 35·15	7·11	0·12	12 6 29·4	39·7	1·8	3·5
27	2 5 25·84	7·11	0·12	12 22 17·7	39·4	1·8	3·5
28	2 8 16·66	7·12	0·12	12 37 58·2	39·0	1·8	3·5
29	2 11 7·64	7·13	0·12	12 53 30·7	38·7	1·8	3·5
30	2 13 58·77	7·13	0·12	13 8 55·2	38·4	1·8	3·5
31	2 16 50·07	+ 7·14	0·12	N. 13 24 11·5	+38·0	1·8	3·5

MAY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 14 1·31	N.13 9 8·9	0·3879812	23 37·5	32 21 37·7	S.0 30 40·0	0·1587
2	2 16 52·74	13 24 25·7	·3881209	23 36·5	32 56 34·7	0 29 34·7	·1590
3	2 19 44·33	13 39 34·2	·3882565	23 35·4	33 31 28·4	0 28 29·4	·1594
4	2 22 36·09	13 54 34·2	·3883881	23 34·3	34 6 18·8	0 27 24·0	·1597
5	2 25 28·03	14 9 25·7	·3885154	23 33·2	34 41 5·9	0 26 18·5	·1600
6	2 28 20·14	14 24 8·4	·3886384	23 32·2	35 15 49·7	0 25 12·9	·1604
7	2 31 12·44	14 38 42·3	·3887569	23 31·1	35 50 30·2	0 24 7·3	·1607
8	2 34 4·92	14 53 7·2	·3888709	23 30·0	36 25 7·3	0 23 1·7	·1611
9	2 36 57·58	15 7 23·1	·3889802	23 29·0	36 59 41·1	0 21 56·0	·1614
10	2 39 50·43	15 21 29·8	·3890847	23 27·9	37 34 11·5	0 20 50·3	·1618
11	2 42 43·47	15 35 27·1	·3891843	23 26·9	38 8 38·5	0 19 44·6	·1621
12	2 45 36·70	15 49 15·0	·3892789	23 25·8	38 43 2·2	0 18 38·9	·1625
13	2 48 30·11	16 2 53·3	·3893684	23 24·8	39 17 22·5	0 17 33·2	·1628
14	2 51 23·71	16 16 21·9	·3894528	23 23·7	39 51 39·4	0 16 27·5	·1632
15	2 54 17·50	16 29 40·7	·3895319	23 22·7	40 25 53·0	0 15 21·8	·1636
16	2 57 11·47	16 42 49·5	·3896056	23 21·6	41 0 3·1	0 14 16·1	·1639
17	3 0 5·62	16 55 48·2	·3896740	23 20·6	41 34 9·9	0 13 10·4	·1643
18	3 2 59·96	17 8 36·8	·3897370	23 19·6	42 8 13·2	0 12 4·8	·1646
19	3 5 54·48	17 21 15·1	·3897946	23 18·5	42 42 13·2	0 10 59·2	·1650
20	3 8 49·17	17 33 42·9	·3898467	23 17·5	43 16 9·8	0 9 53·6	·1654
21	3 11 44·05	17 46 0·2	·3898933	23 16·5	43 50 2·9	0 8 48·1	·1657
22	3 14 39·10	17 58 6·9	·3899344	23 15·5	44 23 52·7	0 7 42·7	·1661
23	3 17 34·32	18 10 2·8	·3899700	23 14·4	44 57 39·1	0 6 37·3	·1665
24	3 20 29·72	18 21 47·9	·3900001	23 13·4	45 31 22·0	0 5 32·0	·1668
25	3 23 25·29	18 33 22·1	·3900247	23 12·4	46 5 1·6	0 4 26·7	·1672
26	3 26 21·03	18 44 45·3	·3900437	23 11·4	46 38 37·7	0 3 21·5	·1676
27	3 29 16·93	18 55 57·4	·3900571	23 10·4	47 12 10·4	0 2 16·5	·1679
28	3 32 13·00	19 6 58·3	·3900650	23 9·4	47 45 39·7	0 1 11·6	·1683
29	3 35 9·23	19 17 48·0	·3900673	23 8·4	48 19 5·5	S.0 0 6·7	·1687
30	3 38 5·62	19 28 26·3	·3900640	23 7·4	48 52 27·9	N.0 0 58·1	·1690
31	3 41 2·17	19 38 53·2	·3900549	23 6·4	49 25 46·9	0 2 2·7	·1694
32	3 43 58·88	N.19 49 8·6	0·3900400	23 5·4	49 59 2·5	N.0 3 7·2	0·1698

MAY, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	2 16 50·07	+ 7·14	0·12	N.13 24 11·5	+38·0	1·8	3·5
2	2 19 41·53	7·15	0·12	13 39 19·4	37·7	1·8	3·5
3	2 22 33·16	7·15	0·12	13 54 18·9	37·3	1·8	3·5
4	2 25 24·96	7·16	0·12	14 9 9·8	36·9	1·8	3·5
5	2 28 16·94	7·17	0·12	14 23 52·1	36·6	1·8	3·5
6	2 31 9·10	7·18	0·12	14 38 25·5	36·2	1·8	3·5
7	2 34 1·45	7·19	0·12	14 52 50·0	35·8	1·8	3·5
8	2 36 53·99	7·19	0·12	15 7 5·4	35·5	1·8	3·5
9	2 39 46·71	7·20	0·12	15 21 11·6	35·1	1·8	3·5
0	2 42 39·62	7·21	0·12	15 35 8·6	34·7	1·8	3·5
1	2 45 32·71	7·22	0·12	15 48 56·1	34·3	1·8	3·5
2	2 48 25·99	7·22	0·12	16 2 34·0	33·9	1·8	3·5
3	2 51 19·46	7·23	0·12	16 16 2·2	33·5	1·8	3·5
4	2 54 13·12	7·24	0·12	16 29 20·7	33·1	1·8	3·5
5	2 57 6·96	7·25	0·13	16 42 29·2	32·6	1·8	3·5
6	3 0 0·98	7·25	0·13	16 55 27·6	32·2	1·8	3·5
7	3 2 55·19	7·26	0·13	17 8 15·9	31·8	1·8	3·5
8	3 5 49·57	7·27	0·13	17 20 53·9	31·4	1·8	3·5
9	3 8 44·14	7·28	0·13	17 33 21·5	30 9	1·8	3·5
0	3 11 38·89	7·28	0·13	17 45 38·6	30·5	1·8	3·5
1	3 14 33·81	7·29	0·13	17 57 45·0	30·0	1·8	3·5
2	3 17 28·90	7·30	0·13	18 9 40·8	29·6	1·8	3·5
3	3 20 24·17	7·31	0·13	18 21 25·8	29·1	1·8	3·5
4	3 23 19·61	7·31	0·13	18 32 59·8	28·7	1·8	3·5
5	3 26 15·22	7·32	0·13	18 44 22·9	28·2	1·8	3·5
6	3 29 10·99	7·33	0·13	18 55 34·9	27·8	1·8	3·5
7	3 32 6·93	7·33	0·13	19 6 35·7	27·3	1·8	3·5
8	3 35 3·03	7·34	0·13	19 17 25·3	26·8	1·8	3·5
9	3 37 59·29	7·35	0·13	19 28 3·6	26·4	1·8	3·5
0	3 40 55·72	7·35	0·13	19 38 30·5	25·9	1·8	3·5
1	3 43 52·30	7·36	0·13	19 48 45·9	25·4	1·8	3·5
2	3 46 49·04	+ 7·37	0·13	N.19 58 49·7	+24·9	1·8	3·5

JUNE, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 43 58·88	N.19 49 8·6	0·3900400	23 5·4	49 59 2·5	N.0 3 7·2	0·1698
2	3 46 55·75	19 59 12·4	·3900193	23 4·4	50 32 14·7	0 4 11·6	·1702
3	3 49 52·78	20 9 4·6	·3899927	23 3·4	51 5 23·4	0 5 15·9	·1705
4	3 52 49·96	20 18 45·1	·3899600	23 2·4	51 38 28·7	0 6 20·0	·1709
5	3 55 47·29	20 28 13·9	·3899211	23 1·4	52 11 30·6	0 7 24·0	·1713
6	3 58 44·76	20 37 30·8	·3898760	23 0·5	52 44 29·0	0 8 27·8	·1717
7	4 1 42·37	20 46 35·8	·3898244	22 59·5	53 17 24·0	0 9 31·4	·1720
8	4 4 40·12	20 55 28·8	·3897663	22 58·5	53 50 15·7	0 10 34·9	·1724
9	4 7 38·00	21 4 9·8	·3897015	22 57·5	54 23 3·9	0 11 38·2	·1728
10	4 10 36·01	21 12 38·6	·3896299	22 56·6	54 55 48·7	0 12 41·4	·1732
11	4 13 34·14	21 20 55·3	·3895515	22 55·6	55 28 30·1	0 13 44·4	·1735
12	4 16 32·37	21 28 59·7	·3894662	22 54·6	56 1 8·2	0 14 47·2	·1739
13	4 19 30·70	21 36 51·8	·3893738	22 53·7	56 33 42·8	0 15 49·8	·1743
14	4 22 29·13	21 44 31·5	·3892743	22 52·7	57 6 14·1	0 16 52·2	·1747
15	4 25 27·64	21 51 58·8	·3891676	22 51·7	57 38 42·0	0 17 54·4	·1750
16	4 28 26·23	21 59 13·6	·3890537	22 50·8	58 11 6·6	0 18 56·4	·1754
17	4 31 24·89	22 6 15·9	·3889325	22 49·8	58 43 27·8	0 19 58·2	·1758
18	4 34 23·61	22 13 5·7	·3888041	22 48·8	59 15 45·6	0 20 59·7	·1762
19	4 37 22·38	22 19 42·8	·3886684	22 47·9	59 48 0·1	0 22 1·1	·1766
20	4 40 21·19	22 26 7·3	·3885253	22 46·9	60 20 11·3	0 23 2·2	·1769
21	4 43 20·04	22 32 19·1	·3883749	22 45·9	60 52 19·1	0 24 3·1	·1773
22	4 46 18·91	22 38 18·2	·3882171	22 45·0	61 24 23·6	0 25 3·7	·1777
23	4 49 17·81	22 44 4·6	·3880520	22 44·0	61 56 24·8	0 26 4·2	·1781
24	4 52 16·72	22 49 38·3	·3878795	22 43·1	62 28 22·6	0 27 4·4	·1784
25	4 55 15·64	22 54 59·2	·3876995	22 42·1	63 0 17·2	0 28 4·3	·1788
26	4 58 14·55	23 0 7·3	·3875121	22 41·1	63 32 8·4	0 29 4·0	·1792
27	5 1 13·45	23 5 2·6	·3873173	22 40·2	64 3 56·3	0 30 3·5	·1796
28	5 4 12·34	23 9 45·2	·3871150	22 39·2	64 35 41·0	0 31 2·7	·1799
29	5 7 11·21	23 14 15·0	·3869051	22 38·3	65 7 22·3	0 32 1·6	·1803
30	5 10 10·05	23 18 32·0	·3866875	22 37·3	65 39 0·4	0 33 0·3	·1807
31	5 13 8·85	N.23 22 36·2	0·3864621	22 36·3	66 10 35·3	N.0 33 58·7	0·1811

JUNE, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	3 46 49·04	+ 7·37	0·13	N.19 58 49·7	+24·9	1·8	3·5
2	3 49 45·94	7·37	0·13	20 8 42·0	24·4	1·8	3·5
3	3 52 42·99	7·38	0·13	20 18 22·6	23·9	1·8	3·5
4	3 55 40·19	7·39	0·13	20 27 51·4	23·5	1·8	3·5
5	3 58 37·54	7·39	0·13	20 37 8·4	23·0	1·8	3·5
6	4 1 35·03	7·40	0·13	20 46 13·5	22·5	1·8	3·5
7	4 4 32·65	7·40	0·13	20 55 6·6	22·0	1·8	3·5
8	4 7 30·40	7·41	0·13	21 3 47·8	21·5	1·8	3·5
9	4 10 28·29	7·41	0·13	21 12 16·8	21·0	1·8	3·5
10	4 13 26·29	7·42	0·13	21 20 33·6	20·4	1·8	3·5
11	4 16 24·39	7·42	0·13	21 28 38·3	19·9	1·8	3·5
12	4 19 22·60	7·43	0·13	21 36 30·6	19·4	1·8	3·5
13	4 22 20·91	7·43	0·13	21 44 10·6	18·9	1·8	3·5
14	4 25 19·30	7·43	0·13	21 51 38·2	18·4	1·8	3·5
15	4 28 17·76	7·44	0·13	21 58 53·3	17·9	1·8	3·5
16	4 31 16·30	7·44	0·13	22 5 55·9	17·3	1·8	3·5
17	4 34 14·89	7·44	0·13	22 12 46·0	16·8	1·8	3·5
18	4 37 13·54	7·45	0·13	22 19 23·5	16·3	1·8	3·5
19	4 40 12·23	7·45	0·13	22 25 48·3	15·8	1·8	3·5
20	4 43 10·96	7·45	0·13	22 32 0·5	15·2	1·8	3·5
21	4 46 9·71	7·45	0·13	22 38 0·1	14·7	1·8	3·5
22	4 49 8·49	7·45	0·13	22 43 46·9	14·2	1·8	3·5
23	4 52 7·28	7·45	0·13	22 49 21·0	13·7	1·8	3·5
24	4 55 6·08	7·45	0·13	22 54 42·4	13·1	1·8	3·5
25	4 58 4·87	7·45	0·13	22 59 51·0	12·6	1·8	3·5
26	5 1 3·65	7·45	0·13	23 4 46·8	12·1	1·8	3·5
27	5 4 2·42	7·45	0·13	23 9 29·9	11·5	1·8	
28	5 7 1·17	7·45	0·13	23 14 0·2	11·0	1·8	
29	5 9 59·90	7·45	0·13	23 18 17·7	10·5	1·8	
30	5 12 58·58	7·44	0·13	23 22 22·5	9·9	1·8	
31	5 15 57·22	+ 7·44	0·13	N.23 26 14·5	+ 9·4	1·8	

JULY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 13 8·85	N.23 22 36·2	0·3864621	22 36·3	66 10 35·3	N.0 33 58·7	0·1811
2	5 16 7·61	23 26 27·6	·3862289	22 35·4	66 42 6·9	0 34 56·9	·1814
3	5 19 6·33	23 30 6·2	·3859878	22 34·4	67 13 35·3	0 35 54·8	·1818
4	5 22 4·99	23 33 32·1	·3857385	22 33·4	67 45 0·5	0 36 52·4	·1822
5	5 25 3·58	23 36 45·2	·3854811	22 32·5	68 16 22·4	0 37 49·7	·1825
6	5 28 2·10	23 39 45·5	·3852153	22 31·5	68 47 41·2	0 38 46·7	·1829
7	5 31 0·53	23 42 33·0	·3849410	22 30·5	69 18 56·8	0 39 43·5	·1833
8	5 33 58·86	23 45 7·8	·3846582	22 29·6	69 50 9·2	0 40 39·9	·1836
9	5 36 57·10	23 47 29·8	·3843666	22 28·6	70 21 18·5	0 41 36·0	·1840
10	5 39 55·22	23 49 39·1	·3840662	22 27·6	70 52 24·6	0 42 31·9	·1844
11	5 42 53·21	23 51 35·6	·3837568	22 26·6	71 23 27·6	0 43 27·4	·1848
12	5 45 51·07	23 53 19·5	·3834385	22 25·7	71 54 27·4	0 44 22·7	·1851
13	5 48 48·78	23 54 50·7	·3831111	22 24·7	72 25 24·2	0 45 17·6	·1855
14	5 51 46·33	23 56 9·3	·3827746	22 23·7	72 56 17·8	0 46 12·2	·1858
15	5 54 43·71	23 57 15·3	·3824288	22 22·7	73 27 8·4	0 47 6·5	·1862
16	5 57 40·91	23 58 8·7	·3820737	22 21·7	73 57 55·9	0 48 0·5	·1866
17	6 0 37·91	23 58 49·6	·3817094	22 20·7	74 28 40·3	0 48 54·1	·1869
18	6 3 34·71	23 59 18·1	·3813358	22 19·7	74 59 21·7	0 49 47·4	·1873
19	6 6 31·30	23 59 34·1	·3809528	22 18·7	75 30 0·0	0 50 40·4	·1877
20	6 9 27·67	23 59 37·7	·3805605	22 17·7	76 0 35·3	0 51 33·1	·1880
21	6 12 23·80	23 59 29·0	·3801588	22 16·7	76 31 7·6	0 52 25·4	·1884
22	6 15 19·70	23 59 8·0	·3797477	22 15·7	77 1 36·9	0 53 17·4	·1887
23	6 18 15·35	23 58 34·8	·3793272	22 14·7	77 32 3·2	0 54 9·1	·1891
24	6 21 10·75	23 57 49·5	·3788973	22 13·7	78 2 26·6	0 55 0·5	·1894
25	6 24 5·88	23 56 52·1	·3784578	22 12·6	78 32 47·0	0 55 51·5	·1898
26	6 27 0·75	23 55 42·7	·3780088	22 11·6	79 3 4·4	0 56 42·1	·1901
27	6 29 55·34	23 54 21·3	·3775503	22 10·6	79 33 18·9	0 57 32·4	·1905
28	6 32 49·65	23 52 48·1	·3770821	22 9·5	80 3 30·5	0 58 22·4	·1908
29	6 35 43·67	23 51 3·0	·3766041	22 8·5	80 33 39·2	0 59 12·0	·1912
30	6 38 37·39	23 49 6·2	·3761163	22 7·4	81 3 45·0	1 0 1·3	·1915
31	6 41 30·81	23 46 57·7	·3756184	22 6·4	81 33 47·9	1 0 50·2	·1919
32	6 44 23·93	N.23 44 37·6	0·3751105	22 5·3	82 3 48·0	N.1 1 38·7	0·1922

JULY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	5 15 57·22	+ 7·44	0·13	N.23 26 14·5	+ 9·4	1·8	3·5
2	5 18 55·82	7·44	0·13	23 29 53·8	8·9	1·8	3·5
3	5 21 54·37	7·44	0·13	23 33 20·2	8·3	1·8	3·5
4	5 24 52·85	7·44	0·13	23 36 33·9	7·8	1·8	3·5
5	5 27 51·25	7·43	0·13	23 39 34·9	7·3	1·8	3·5
6	5 30 49·56	7·43	0·13	23 42 23·1	6·7	1·8	3·5
7	5 33 47·78	7·42	0·13	23 44 58·5	6·2	1·8	3·5
8	5 36 45·91	7·42	0·13	23 47 21·2	5·7	1·8	3·5
9	5 39 43·92	7·41	0·13	23 49 31·2	5·2	1·8	3·5
10	5 42 41·80	7·41	0·13	23 51 28·5	4·6	1·8	3·5
11	5 45 39·54	7·40	0·13	23 53 13·1	4·1	1·8	3·5
12	5 48 37·14	7·40	0·14	23 54 45·1	3·6	1·9	3·6
13	5 51 34·58	7·39	0·14	23 56 4·5	3·0	1·9	3·6
14	5 54 31·85	7·38	0·14	23 57 11·3	2·5	1·9	3·6
15	5 57 28·94	7·37	0·14	23 58 5·5	2·0	1·9	3·6
16	6 0 25·83	7·37	0·14	23 58 47·2	1·5	1·9	3·6
17	6 3 22·53	7·36	0·14	23 59 16·5	1·0	1·9	3·6
18	6 6 19·01	7·35	0·14	23 59 33·4	+ 0·4	1·9	3·6
19	6 9 15·27	7·34	0·14	23 59 37·9	− 0·1	1·9	3·6
20	6 12 11·30	7·33	0·14	23 59 30·0	0·6	1·9	3·6
21	6 15 7·09	7·32	0·14	23 59 9·9	1·1	1·9	3·6
22	6 18 2·64	7·31	0·14	23 58 37·7	1·6	1·9	3·6
23	6 20 57·93	7·30	0·14	23 57 53·3	2·1	1·9	3·6
24	6 23 52·96	7·29	0·14	23 56 56·8	2·6	1·9	3·6
25	6 26 47·72	7·28	0·14	23 55 48·3	3·1	1·9	3·6
26	6 29 42·21	7·26	0·14	23 54 27·9	3·6	1·9	3·6
27	6 32 36·41	7·25	0·14	23 52 55·6	4·1	1·9	3·6
28	6 35 30·32	7·24	0·14	23 51 11·5	4·6	1·9	3·6
29	6 38 23·94	7·23	0·14	23 49 15·7	5·1	1·9	3·6
30	6 41 17·26	7·22	0·14	23 47 8·2	5·6	1·9	
31	6 44 10·28	7·20	0·14	23 44 49·1	6·0	1·9	
32	6 47 2·98	+ 7·19	0·14	N.23 42 18·5	− 6·5	1·9	

AUGUST, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	6 44 23·93	N.23 44 37·6	0·3751105	22 5·3	82 3 48·0	N.1 1 38·7	0·1922
2	6 47 16·73	23 42 6·0	·3745923	22 4·2	82 33 45·2	1 2 26·9	·1926
3	6 50 9·22	23 39 22·9	·3740638	22 3·2	83 3 39·6	1 3 14·7	·1929
4	6 53 1·37	23 36 28·5	·3735247	22 2·1	83 33 31·1	1 4 2·2	·1933
5	6 55 53·19	23 33 22·8	·3729750	22 1·0	84 3 19·9	1 4 49·3	·1936
6	6 58 44·66	23 30 5·9	·3724145	21 59·9	84 33 5·9	1 5 36·0	·1939
7	7 1 35·78	23 26 37·9	·3718432	21 58·8	85 2 49·1	1 6 22·4	·1943
8	7 4 26·54	23 22 58·8	·3712608	21 57·7	85 32 29·6	1 7 8·4	·1946
9	7 7 16·93	23 19 8·8	·3706672	21 56·6	86 2 7·3	1 7 54·0	·1949
10	7 10 6·95	23 15 7·9	·3700624	21 55·5	86 31 42·3	1 8 39·3	·1953
11	7 12 56·58	23 10 56·2	·3694464	21 54·4	87 1 14·6	1 9 24·2	·1956
12	7 15 45·82	23 6 33·9	·3688190	21 53·2	87 30 44·3	1 10 8·7	·1959
13	7 18 34·66	23 2 1·1	·3681802	21 52·1	88 0 11·3	1 10 52·8	·1963
14	7 21 23·09	22 57 17·8	·3675298	21 51·0	88 29 35·7	1 11 36·6	·1966
15	7 24 11·10	22 52 24·2	·3668679	21 49·8	88 58 57·4	1 12 19·9	·1969
16	7 26 58·69	22 47 20·3	·3661944	21 48·7	89 28 16·6	1 13 2·9	·1972
17	7 29 45·85	22 42 6·3	·3655093	21 47·5	89 57 33·1	1 13 45·5	·1976
18	7 32 32·58	22 36 42·2	·3648126	21 46·3	90 26 47·1	1 14 27·7	·1979
19	7 35 18·87	22 31 8·3	·3641042	21 45·2	90 55 58·5	1 15 9·6	·1982
20	7 38 4·71	22 25 24·6	·3633842	21 44·0	91 25 7·3	1 15 51·1	·1985
21	7 40 50·11	22 19 31·2	·3626524	21 42·8	91 54 13·6	1 16 32·2	·1988
22	7 43 35·05	22 13 28·2	·3619089	21 41·6	92 23 17·4	1 17 12·9	·1992
23	7 46 19·54	22 7 15·7	·3611535	21 40·4	92 52 18·7	1 17 53 2	·1995
24	7 49 3·58	22 0 53·9	·3603862	21 39·2	93 21 17·5	1 18 33·1	·1998
25	7 51 47·16	21 54 22·9	·3596070	21 37·9	93 50 13·8	1 19 12·6	·2001
26	7 54 30·28	21 47 42·8	·3588158	21 36·7	94 19 7·6	1 19 51·7	·2004
27	7 57 12·95	21 40 53·6	·3580124	21 35·5	94 47 59·0	1 20 30·4	·2007
28	7 59 55·15	21 33 55·5	·3571968	21 34·2	95 16 48·0	1 21 8·8	·2010
29	8 2 36·89	21 26 48·6	·3563687	21 33·0	95 45 34·6	1 21 46·7	·2013
30	8 5 18·16	21 19 33·0	·3555281	21 31·7	96 14 18·8	1 22 24·3	·2016
31	8 7 58·97	21 12 8·8	·3546748	21 30·4	96 43 0·7	1 23 1·4	·2019
32	8 10 39·31	N.21 4 36·1	0·3538087	21 29·2	97 11 40·2	N.1 23 38·2	0·2022

AUGUST, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	6 47 2·98	+ 7·19	0·14	N.23 42 18·5	− 6·5	1·9	3·6
2	6 49 55·36	7·17	0·14	23 39 36·5	7·0	1·9	3·6
3	6 52 47·41	7·16	0·14	23 36 43·1	7·5	1·9	3·6
4	6 55 39·13	7·15	0·14	23 33 38·5	7·9	1·9	3·6
5	6 58 30·50	7·13	0·14	23 30 22·6	8·4	1·9	3·6
6	7 1 21·52	7·12	0·14	23 26 55·7	8·9	1·9	3·6
7	7 4 12·19	7·10	0·14	23 23 17·7	9·3	1·9	3·6
8	7 7 2·48	7·09	0·14	23 19 28·7	9·8	1·9	3·6
9	7 9 52·40	7·07	0·14	23 15 28·9	10·2	1·9	3·7
10	7 12 41·93	7·06	0·14	23 11 18·4	10·7	1·9	3·7
11	7 15 31·07	7·04	0·14	23 6 57·2	11·1	1·9	3·7
12	7 18 19·81	7·02	0·14	23 2 25·5	11·5	1·9	3·7
13	7 21 8·14	7·01	0·14	22 57 43·4	12·0	1·9	3·7
14	7 23 56·06	6·99	0·14	22 52 50·9	12·4	1·9	3·7
15	7 26 43·56	6·97	0·14	22 47 48·2	12·8	1·9	3·7
16	7 29 30·63	6·95	0·14	22 42 35·3	13·2	1·9	3·7
17	7 32 17·26	6·93	0·14	22 37 12·4	13·7	1·9	3·7
18	7 35 3·45	6·92	0·14	22 31 39·7	14·1	1·9	3·7
19	7 37 49·20	6·90	0·14	22 25 57·2	14·5	1·9	3·7
20	7 40 34·50	6·88	0·14	22 20 5·0	14·9	1·9	3·7
21	7 43 19·35	6·86	0·14	22 14 3·2	15·3	1·9	3·7
22	7 46 3·75	6·84	0·14	22 7 52·0	15·7	1·9	3·7
23	7 48 47·69	6·82	0·14	22 1 31·4	16·1	1·9	3·7
24	7 51 31·18	6·80	0·14	21 55 1·5	16·4	1·9	3·7
25	7 54 14·21	6·78	0·14	21 48 22·6	16·8	1·9	3·7
26	7 56 56·78	6·76	0·14	21 41 34·7	17·2	2·0	
27	7 59 38·89	6·75	0·14	21 34 37·8	17·6	2·0	
28	8 2 20·54	6·73	0·14	21 27 32·1	17·9	2·0	
29	8 5 1·72	6·71	0·14	21 20 17·8	18·3	2·0	
30	8 7 42·43	6·69	0·14	21 12 54·9	18·7	2·0	
31	8 10 22·68	6·67	0·14	21 5 23·5	19·0	2·0	
32	8 13 2·46	+ 6·65	0·14	N.20 57 43·7	−19·3	2·	

SEPTEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	8 10 39·31	N.21 4 36·1	0·3538087	21 29·2	97 11 40·2	N.1 23 38·2	0·20224
2	8 13 19·18	20 56 55·1	·3529295	21 27·9	97 40 17·4	1 24 14·6	·20254
3	8 15 58·58	20 49 5·8	·3520372	21 26·6	98 8 52·3	1 24 50·5	·20283
4	8 18 37·50	20 41 8·4	·3511317	21 25·3	98 37 24·9	1 25 26·1	·20312
5	8 21 15·94	20 33 3·0	·3502128	21 24·0	99 5 55·2	1 26 1·2	·20341
6	8 23 53·89	20 24 49·8	·3492803	21 22·7	99 34 23·3	1 26 36·0	·20370
7	8 26 31·36	20 16 28·8	·3483341	21 21·3	100 2 49·2	1 27 10·3	·20398
8	8 29 8·34	20 8 0·2	·3473741	21 20·0	100 31 12·8	1 27 44·3	·20426
9	8 31 44·83	19 59 24·1	·3464002	21 18·7	100 59 34·3	1 28 17·8	·20455
10	8 34 20·82	19 50 40·6	·3454124	21 17·3	101 27 53·6	1 28 51·0	·20482
11	8 36 56·31	19 41 49·9	·3444105	21 16·0	101 56 10·8	1 29 23·7	·20510
12	8 39 31·29	19 32 52·1	·3433946	21 14·6	102 24 25·8	1 29 56·0	·20538
13	8 42 5·77	19 23 47·3	·3423644	21 13·2	102 52 38·7	1 30 27·9	·20565
14	8 44 39·74	19 14 35·7	·3413200	21 11·8	103 20 49·5	1 30 59·5	·20592
15	8 47 13·20	19 5 17·4	·3402614	21 10·4	103 48 58·2	1 31 30·6	·20619
16	8 49 46·16	18 55 52·6	·3391885	21 9·0	104 17 4·9	1 32 1·3	·20646
17	8 52 18·61	18 46 21·3	·3381013	21 7·6	104 45 9·5	1 32 31·6	·20672
18	8 54 50·55	18 36 43·7	·3369997	21 6·2	105 13 12·1	1 33 1·5	·20699
19	8 57 21·98	18 26 59·9	·3358837	21 4·8	105 41 12·7	1 33 31·0	·20725
20	8 59 52·91	18 17 10·1	·3347533	21 3·4	106 9 11·3	1 34 0·1	·20751
21	9 2 23·33	18 7 14·4	·3336083	21 1·9	106 37 7·9	1 34 28·8	·20776
22	9 4 53·25	17 57 12·8	·3324487	21 0·5	107 5 2·6	1 34 57·1	·20802
23	9 7 22·67	17 47 5·5	·3312743	20 59·0	107 32 55·3	1 35 25·0	·20827
24	9 9 51·59	17 36 52·6	·3300851	20 57·5	108 0 46·1	1 35 52·4	·20852
25	9 12 20·02	17 26 34·2	·3288810	20 56·1	108 28 35·0	1 36 19·5	·20877
26	9 14 47·95	17 16 10·5	·3276618	20 54·6	108 56 22·0	1 36 46·1	·20901
27	9 17 15·39	17 5 41·5	·3264274	20 53·1	109 24 7·2	1 37 12·4	·20926
28	9 19 42·35	16 55 7·4	·3251776	20 51·6	109 51 50·5	1 37 38·2	·20950
29	9 22 8·81	16 44 28·3	·3239122	20 50·1	110 19 31·9	1 38 3·7	·20974
30	9 24 34·78	16 33 44·3	·3226311	20 48·6	110 47 11·6	1 38 28·7	·20998
31	9 27 0·27	N.16 22 55·5	0·3213341	20 47·0	111 14 49·4	N.1 38 53·3	0·21021

SEPTEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	8 13 2·46	+ 6·65	0·14	N.20 57 43·7	−19·3	2·0	3·8
2	8 15 41·76	6·63	0·14	20 49 55·8	19·7	2·0	3·8
3	8 18 20·59	6·61	0·14	20 41 59·7	20·0	2·0	3·8
4	8 20 58·94	6·59	0·14	20 33 55·6	20·3	2·0	3·8
5	8 23 36·80	6·57	0·14	20 25 43·6	20·7	2·0	3·8
6	8 26 14·18	6·55	0·14	20 17 23·9	21·0	2·0	3·8
7	8 28 51·07	6·53	0·14	20 8 56·6	21·3	2·0	3·8
8	8 31 27·47	6·51	0·14	20 0 21·8	21·6	2·0	3·9
9	8 34 3·37	6·49	0·14	19 51 39·6	21·9	2·0	3·9
10	8 36 38·77	6·46	0·14	19 42 50·2	22·2	2·0	3·9
11	8 39 13·66	6·44	0·14	19 33 53·7	22·5	2·0	3·9
12	8 41 48·05	6·42	0·14	19 24 50·3	22·8	2·0	3·9
13	8 44 21·93	6·40	0·14	19 15 40·0	23·1	2·0	3·9
14	8 46 55·31	6·38	0·14	19 6 23·0	23·3	2·0	3·9
15	8 49 28·18	6·36	0·14	18 56 59·4	23·6	2·0	3·9
16	8 52 0·54	6·34	0·14	18 47 29·4	23·9	2·0	3·9
17	8 54 32·39	6·32	0·14	18 37 53·2	24·1	2·0	3·9
18	8 57 3·73	6·30	0·14	18 28 10·7	24·4	2·0	3·9
19	8 59 34·57	6·27	0·15	18 18 22·2	24·6	2·1	4·0
20	9 2 4·91	6·25	0·15	18 8 27·8	24·9	2·1	4·0
21	9 4 34·74	6·23	0·15	17 58 27·5	25·1	2·1	4·0
22	9 7 4·07	6·21	0·15	17 48 21·5	25·4	2·1	4·0
23	9 9 32·90	6·19	0·15	17 38 9·9	25·6	2·1	4·0
24	9 12 1·24	6·17	0·15	17 27 52·8	25·8	2·1	4·0
25	9 14 29·08	6·15	0·15	17 17 30·4	26·0	2·1	4·0
26	9 16 56·44	6·13	0·15	17 7 2·8	26·3	2·1	4·0
27	9 19 23·30	6·11	0·15	16 56 30·0	26·5	2·1	4·0
28	9 21 49·67	6·09	0·15	16 45 52·2	26·7	2	
29	9 24 15·56	6·07	0·15	16 35 9·5	26·9		
30	9 26 40·96	6·05	0·14	16 24 22·0	27·1		
31	9 29 5·87	+ 6·03	0·14	N.16 13 29·9	−27·3		

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	9 27 0·27	N.16 22 55·5	0·3213341	20 47·0	111 14 49·4	N.1 38 53·3	0·210
2	9 29 25·27	16 12 2·1	·3200210	20 45·5	111 42 25·5	1 39 17·5	·210
3	9 31 49·79	16 1 4·2	·3186916	20 44·0	112 9 59·8	1 39 41·3	·210
4	9 34 13·81	15 50 1·9	·3173459	20 42·4	112 37 32·3	1 40 4·6	·210
5	9 36 37·34	15 38 55·4	·3159836	20 40·9	113 5 3·1	1 40 27·6	·211
6	9 39 0·39	15 27 44·7	·3146046	20 39·3	113 32 32·3	1 40 50·1	·211
7	9 41 22·95	15 16 30·1	·3132086	20 37·8	113 59 59·7	1 41 12·3	·211
8	9 43 45·01	15 5 11·6	·3117957	20 36·2	114 27 25·5	1 41 34·0	·211
9	9 46 6·58	14 53 49·4	·3103658	20 34·6	114 54 49·6	1 41 55·4	·212
10	9 48 27·66	14 42 23·6	·3089188	20 33·0	115 22 12·1	1 42 16·3	·212
11	9 50 48·24	14 30 54·4	·3074545	20 31·4	115 49 33·0	1 42 36·8	·212
12	9 53 8·33	14 19 21·9	·3059730	20 29·8	116 16 52·3	1 42 56·9	·212
13	9 55 27·93	14 7 46·3	·3044741	20 28·1	116 44 10·0	1 43 16·6	·212
14	9 57 47·04	13 56 7·6	·3029578	20 26·5	117 11 26·2	1 43 35·9	·213
15	10 0 5·65	13 44 26·0	·3014240	20 24·9	117 38 40·9	1 43 54·8	·213
16	10 2 23·78	13 32 41·7	·2998728	20 23·2	118 5 54·0	1 44 13·3	·213
17	10 4 41·42	13 20 54·7	·2983040	20 21·6	118 33 5·7	1 44 31·3	·213
18	10 6 58·57	13 9 5·1	·2967176	20 19·9	119 0 15·9	1 44 49·0	·213
19	10 9 15·23	12 57 13·1	·2951136	20 18·3	119 27 24·6	1 45 6·2	·214
20	10 11 31·42	12 45 18·8	·2934919	20 16·6	119 54 31·9	1 45 23·1	·214
21	10 13 47·12	12 33 22·3	·2918523	20 14·9	120 21 37·7	1 45 39·5	·214
22	10 16 2·35	12 21 23·8	·2901947	20 13·2	120 48 42·2	1 45 55·6	·214
23	10 18 17·10	12 9 23·2	·2885189	20 11·5	121 15 45·3	1 46 11·2	·214
24	10 20 31·38	11 57 20·7	·2868249	20 9·8	121 42 47·0	1 46 26·4	·215
25	10 22 45·20	11 45 16·4	·2851125	20 8·1	122 9 47·4	1 46 41·2	·215
26	10 24 58·55	11 33 10·5	·2833815	20 6·3	122 36 46·4	1 46 55·6	·215
27	10 27 11·44	11 21 3·1	·2816317	20 4·6	123 3 44·2	1 47 9·6	·215
28	10 29 23·86	11 8 54·2	·2798628	20 2·9	123 30 40·7	1 47 23·2	·215
29	10 31 35·82	10 56 44·0	·2780748	20 1·1	123 57 35·9	1 47 36·4	·215
30	10 33 47·32	10 44 32·6	·2762674	19 59·4	124 24 29·8	1 47 49·1	·216
31	10 35 58·36	10 32 20·2	·2744404	19 57·6	124 51 22·5	1 48 1·5	·216
32	10 38 8·93	N.10 20 6·8	0·2725936	19 55·8	125 18 14·0	N.1 48 13·4	0·216

OCTOBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
9 29 5·87	+ 6·03	0·14	N.16 13 29·9	−27·3	2·1	4·1
9 31 30·30	6·01	0·14	16 2 33·3	27·5	2·1	4·1
9 33 54·23	5·99	0·14	15 51 32·3	27·6	2·1	4·1
9 36 17·68	5·97	0·14	15 40 27·1	27·8	2·1	4·1
9 38 40·64	5·95	0·14	15 29 17·7	28·0	2·1	4·1
9 41 3·11	5·93	0·15	15 18 4·3	28·1	2·2	4·2
9 43 25·08	5·91	0·15	15 6 47·1	28·3	2·2	4·2
9 45 46·57	5·89	0·15	14 55 26·1	28·4	2·2	4·2
9 48 7·56	5·86	0·15	14 44 1·6	28·6	2·2	4·2
9 50 28·06	5·84	0·15	14 32 33·7	28·7	2·2	4·2
9 52 48·06	5·82	0·15	14 21 2·4	28·9	2·2	4·2
9 55 7·58	5·80	0·15	14 9 28·0	29·0	2·2	4·2
9 57 26·60	5·78	0·15	13 57 50·6	29·1	2·2	4·3
9 59 45·13	5·76	0·15	13 46 10·2	29·2	2·2	4·3
10 2 3·17	5·74	0·15	13 34 27·0	29·4	2·2	4·3
10 4 20·73	5·72	0·15	13 22 41·2	29·5	2·2	4·3
10 6 37·80	5·70	0·15	13 10 52·9	29·6	2·2	4·3
10 8 54·38	5·68	0·15	12 59 2·1	29·7	2·2	4·3
10 11 10·47	5·66	0·15	12 47 9·0	29·8	2·2	4·3
10 13 26·09	5·64	0·15	12 35 13·7	29·8	2·3	4·4
10 15 41·24	5·62	0·15	12 23 16·2	29·9	2·3	4·4
10 17 55·91	5·60	0·15	12 11 16·8	30·0	2·3	4·4
10 20 10·10	5·58	0·15	11 59 15·5	30·1	2·3	4·4
10 22 23·83	5·56	0·15	11 47 12·3	30·2	2·3	4·4
10 24 37·10	5·54	0·15	11 35 7·5	30·2	2·3	4·4
10 26 49·91	5·52	0·15	11 23 1·2	30·3	2·3	4·5
10 29 2·25	5·50	0·15	11 10 53·4	30·3	2·3	4·5
10 31 14·13	5·49	0·15	10 58 44·3	30·4	2·3	4·5
10 33 25·54	5·47	0·15	10 46 34·0	30·5	2·3	4·5
10 35 36·49	5·45	0·15	10 34 22·6	30·5	2·3	4·5
10 37 46·98	5·43	0·16	10 22 10·3	30·5	2·4	4·6
10 39 57·00	+ 5·41	0·16	N.10 9 57·1	−30·6	2·4	4·6

NOVEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vec.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	10 38 8·93	N. 10 20 6·8	0·2725936	19 55·8	125 18 14·0	N. 1 48 13·4	0·21637
2	10 40 19·03	10 7 52·6	·2707268	19 54·1	125 45 4·3	1 48 25·0	·21653
3	10 42 28·67	9 55 37·8	·2688399	19 52·3	126 11 53·4	1 48 36·2	·21669
4	10 44 37·83	9 43 22·4	·2669327	19 50·5	126 38 41·4	1 48 46·9	·21684
5	10 46 46·52	9 31 6·6	·2650051	19 48·7	127 5 28·2	1 48 57·3	·21700
6	10 48 54·74	9 18 50·5	·2630568	19 46·9	127 32 13·9	1 49 7·3	·21715
7	10 51 2·48	9 6 34·3	·2610877	19 45·0	127 58 58·5	1 49 16·8	·21730
8	10 53 9·74	8 54 18·1	·2590979	19 43·2	128 25 42·0	1 49 25·9	·21744
9	10 55 16·52	8 42 2·0	·2570873	19 41·4	128 52 24·5	1 49 34·7	·21759
10	10 57 22·81	8 29 46·1	·2550558	19 39·6	129 19 5·9	1 49 43·0	·21773
11	10 59 28·61	8 17 30·7	·2530033	19 37·7	129 45 46·3	1 49 51·0	·21787
12	11 1 33·92	8 5 15·8	·2509297	19 35·8	130 12 25·6	1 49 58·5	·21800
13	11 3 38·74	7 53 1·6	·2488351	19 34·0	130 39 4·0	1 50 5·7	·21814
14	11 5 43·07	7 40 48·2	·2467193	19 32·1	131 5 41·4	1 50 12·4	·21827
15	11 7 46·91	7 28 35·6	·2445823	19 30·2	131 32 17·8	1 50 18·8	·21840
16	11 9 50·26	7 16 24·0	·2424239	19 28·3	131 58 53·3	1 50 24·7	·21853
17	11 11 53·11	7 4 13·5	·2402441	19 26·4	132 25 27·9	1 50 30·3	·21866
18	11 13 55·47	6 52 4·2	·2380429	19 24·5	132 52 1·6	1 50 35·4	·21879
19	11 15 57·33	6 39 56·3	·2358201	19 22·6	133 18 34·4	1 50 40·2	·21888
20	11 17 58·70	6 27 49·7	·2335755	19 20·7	133 45 6·3	1 50 44·5	·21900
21	11 19 59·58	6 15 44·6	·2313089	19 18·8	134 11 37·4	1 50 48·5	·21913
22	11 21 59·96	6 3 41·2	·2290202	19 16·8	134 38 7·6	1 50 52·0	·21925
23	11 23 59·84	5 51 39·5	·2267092	19 14·8	135 4 37·1	1 50 55·2	·21938
24	11 25 59·23	5 39 39·6	·2243758	19 12·9	135 31 5·8	1 50 57·9	·21949
25	11 27 58·11	5 27 41·6	·2220198	19 10·9	135 57 33·7	1 51 0·3	·21959
26	11 29 56·49	5 15 45·7	·2196408	19 8·9	136 24 0·9	1 51 2·2	·21969
27	11 31 54·36	5 3 52·0	·2172387	19 7·0	136 50 27·4	1 51 3·8	·21977
28	11 33 51·71	4 52 0·5	·2148133	19 5·0	137 16 53·2	1 51 5·0	·21985
29	11 35 48·55	4 40 11·5	·2123644	19 3·0	137 43 18·3	1 51 5·8	·21990
30	11 37 44·86	4 28 25·0	·2098917	19 1·0	138 9 42·8	1 51 6·2	·22000
31	11 39 40·64	N. 4 16 41·2	0·2073950	18 59·0	138 36 6·6	N. 1 51 6·2	0·22013

NOVEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
0 39 57·00	+ 5·41	0·16	N. 10 9 57·1	−30·6	2·4	4·6
0 42 6·56	5·39	0·16	9 57 43·3	30·6	2·4	4·6
0 44 15·64	5·37	0·16	9 45 28·9	30·6	2·4	4·6
0 46 24·25	5·35	0·16	9 33 14·1	30·6	2·4	4·6
0 48 32·39	5·33	0·16	9 20 59·0	30·6	2·4	4·7
0 50 40·06	5·31	0·16	9 8 43·7	30·6	2·4	4·7
0 52 47·24	5·29	0·16	8 56 28·4	30·6	2·4	4·7
0 54 53·94	5·27	0·16	8 44 13·2	30·6	2·4	4·7
0 57 0·16	5·25	0·16	8 31 58·3	30·6	2·4	4·7
0 59 5·89	5·23	0·17	8 19 43·7	30·6	2·5	4·8
1 1 11·13	5·21	0·17	8 7 29·7	30·6	2·5	4·8
1 3 15·88	5·19	0·17	7 55 16·3	30·5	2·5	4·8
1 5 20·14	5·17	0·17	7 43 3·6	30·5	2·5	4·8
1 7 23·91	5·15	0·17	7 30 51·8	30·5	2·5	4·9
1 9 27·18	5·13	0·17	7 18 41·0	30·4	2·5	4·9
1 11 29·97	5·11	0·17	7 6 31·2	30·4	2·5	4·9
1 13 32·26	5·09	0·17	6 54 22·7	30·3	2·5	4·9
1 15 34·05	5·06	0·18	6 42 15·4	30·3	2·6	5·0
1 17 35·35	5·04	0·18	6 30 9·5	30·2	2·6	5·0
1 19 36·17	5·02	0·18	6 18 5·2	30·1	2·6	5·0
1 21 36·48	5·00	0·18	6 6 2·4	30·1	2·6	5·0
1 23 36·30	4·98	0·18	5 54 1·3	30·0	2·6	5·1
1 25 35·63	4·96	0·18	5 42 2·0	29·9	2·6	5·1
1 27 34·45	4·94	0·18	5 30 4·6	29·9	2·6	5·1
1 29 32·77	4·92	0·18	5 18 9·2	29·8	2·6	5·1
1 31 30·58	4·90	0·18	5 6 16·0	29·7	2·7	5·2
1 33 27·88	4·88	0·18	4 54 25·1	29·6	2·7	5·2
1 35 24·66	4·86	0·18	4 42 36·6	29·5	2·7	5·2
1 37 20·92	4·83	0·18	4 30 50·5	29·4	2·7	5·3
1 39 16·64	4·81	0·18	4 19 7·1	29·3	2·7	5·3
1 41 11·83	+ 4·79	0·18	N. 4 7 26·5	−29·1	2·7	5·?

DECEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	11 39 40·64	N.4 16 41·2	0·2073950	18 59·0	138 36 6·6	N.1 51 6·2	0·22011
2	11 41 35·88	4 5 0·2	·2048743	18 56·9	139 2 29·8	1 51 5·8	·2202c
3	11 43 30·57	3 53 22·2	·2023293	18 54·9	139 28 52·4	1 51 5·0	·2202
4	11 45 24·70	3 41 47·3	·1997599	18 52·9	139 55 14·4	1 51 3·8	·22036
5	11 47 18·26	3 30 15·6	·1971661	18 50·8	140 21 35·8	1 51 2·2	·22044
6	11 49 11·24	3 18 47·4	·1945475	18 48·7	140 47 56·7	1 51 0·2	·22052
7	11 51 3·64	3 7 22·7	·1919042	18 46·7	141 14 17·1	1 50 57·9	·22059
8	11 52 55·45	2 56 1·7	·1892362	18 44·6	141 40 36·9	1 50 55·1	·22066
9	11 54 46·65	2 44 44·5	·1865434	18 42·5	142 6 56·2	1 50 52·0	·22073
10	11 56 37·24	2 33 31·2	·1838257	18 40·4	142 33 15·0	1 50 48·5	·22079
11	11 58 27·21	2 22 22·0	·1810831	18 38·3	142 59 33·3	1 50 44·6	·22086
12	12 0 16·55	2 11 17·0	·1783156	18 36·1	143 25 51·1	1 50 40·3	·22092
13	12 2 5·24	2 0 16·3	·1755231	18 34·0	143 52 8·5	1 50 35·6	·22098
14	12 3 53·29	1 49 20·1	·1727056	18 31·9	144 18 25·5	1 50 30·5	·22105
15	12 5 40·69	1 38 28·4	·1698630	18 29·7	144 44 42·1	1 50 25·1	·22108
16	12 7 27·43	1 27 41·3	·1669952	18 27·5	145 10 58·3	1 50 19·3	·22111
17	12 9 13·49	1 16 58·9	·1641022	18 25·4	145 37 14·1	1 50 13·1	·22118
18	12 10 58·87	1 6 21·3	·1611841	18 23·2	146 3 29·6	1 50 6·5	·22125
19	12 12 43·57	0 55 48·7	·1582406	18 21·0	146 29 44·8	1 49 59·5	·22127
20	12 14 27·57	0 45 21·2	·1552715	18 18·7	146 55 59·7	1 49 52·1	·22131
21	12 16 10·86	0 34 58·9	·1522767	18 16·5	147 22 14·2	1 49 44·3	·22134
22	12 17 53·42	0 24 41·9	·1492561	18 14·3	147 48 28·5	1 49 36·2	·22138
23	12 19 35·26	0 14 30·4	·1462095	18 12·0	148 14 42·6	1 49 27·7	·22141
24	12 21 16·36	N.0 4 24·3	·1431368	18 9·7	148 40 56·5	1 49 18·8	·22144
25	12 22 56·70	S.0 5 36·2	·1400378	18 7·5	149 7 10·1	1 49 9·5	·22147
26	12 24 36·27	0 15 31·0	·1369123	18 5·2	149 33 23·5	1 48 59·8	·22149
27	12 26 15·05	0 25 19·8	·1337601	18 2·9	149 59 36·8	1 48 49·8	·22151
28	12 27 53·02	0 35 2·5	·1305811	18 0·6	150 25 50·0	1 48 39·4	·22153
29	12 29 30·17	0 44 39·0	·1273752	17 58·2	150 52 3·0	1 48 28·6	·22155
30	12 31 6·47	0 54 9·2	·1241421	17 55·9	151 18 15·9	1 48 17·4	·22156
31	12 32 41·91	1 3 32·8	·1208818	17 53·5	151 44 28·7	1 48 5·8	·22157
32	12 34 16·46	S.1 12 49·8	0·1175944	17 51·1	152 10 41·4	N.1 47 53·9	0·22158

DECEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
11 41 11·83	+4·79	0·18	N. 4 7 26·5	−29·1	2·7	5·3
11 43 6·47	4·77	0·19	3 55 48·8	29·0	2·8	5·4
11 45 0·56	4·74	0·19	3 44 14·2	28·9	2·8	5·4
11 46 54·08	4·72	0·19	3 32 42·8	28·7	2·8	5·4
11 48 47·03	4·69	0·19	3 21 14·8	28·6	2·8	5·4
11 50 39·40	4·67	0·19	3 9 50·3	28·4	2·8	5·5
11 52 31·17	4·64	0·19	2 58 29·5	28·3	2·8	5·5
11 54 22·35	4·62	0·19	2 47 12·5	28·1	2·8	5·5
11 56 12·91	4·59	0·19	2 35 59·3	28·0	2·9	5·6
11 58 2·86	4·57	0·19	2 24 50·2	27·8	2·9	5·6
11 59 52·17	4·54	0·19	2 13 45·2	27·6	2·9	5·7
12 1 40·85	4·52	0·19	2 2 44·6	27·4	2·9	5·7
12 3 28·89	4·49	0·19	1 51 48·3	27·3	2·9	5·7
12 5 16·28	4·46	0·20	1 40 56·5	27·1	3·0	5·8
12 7 3·01	4·43	0·20	1 30 9·3	26·9	3·0	5·8
12 8 49·06	4·40	0·20	1 19 26·8	26·7	3·0	5·8
12 10 34·44	4·38	0·21	1 8 49·1	26·5	3·1	5·9
12 12 19·14	4·35	0·21	0 58 16·3	26·3	3·1	5·9
12 14 3·14	4·32	0·21	0 47 48·5	26·1	3·1	6·0
12 15 46·44	4·29	0·21	0 37 25·9	25·8	3·1	6·0
12 17 29·02	4·26	0·21	0 27 8·6	25·6	3·1	6·0
12 19 10·88	4·23	0·22	0 16 56·7	25·4	3·2	6·1
12 20 52·00	4·20	0·22	N. 0 6 50·2	25·2	3·2	6·1
12 22 32·37	4·17	0·22	S. 0 3 10·7	24·9	3·2	6·2
12 24 11·97	4·13	0·22	0 13 5·9	24·7	3·2	6·2
12 25 50·79	4·10	0·22	0 22 55·3	24·4	3·3	6·3
12 27 28·80	4·07	0·22	0 32 38·6	24·2	3·3	6·
12 29 6·00	4·03	0·22	0 42 15·7	23·9	3·3	6·
12 30 42·36	4·00	0·22	0 51 46·5	23·6	3·3	6
12 32 17·86	3·96	0·22	1 1 10·9	23·4	3·3	6
12 33 52·48	3·92	0·23	1 10 28·6	23·1	3·4	6
12 35 26·20	+3·89	0·23	S. 1 19 39·6	−22·8	3·4	6

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1854.	h m	° ′		h m	° ′	° ′	
Dec. 30	17 11·8	S. 20 10	0·4841	22 35·7	249 42	N. 3 58	0·3327
1855.							
Jan. 3	17 20·8	20 25	0·4817	22 29·1	251 0	3 50	0·3327
7	17 29·9	20 38	0·4791	22 22·5	252 18	3 42	0·3327
11	17 38·9	20 48	0·4763	22 15·7	253 36	3 34	0·3327
15	17 47·9	20 57	0·4733	22 8·9	254 54	3 25	0·3328
19	17 56·9	21 4	0·4700	22 2·1	256 12	3 17	0·3329
23	18 5·9	21 9	0·4665	21 55·3	257 30	3 8	0·3330
27	18 14·9	21 12	0·4628	21 48·5	258 47	2 59	0·3330
31	18 23·8	21 14	0·4589	21 41·7	260 5	2 50	0·3331
Feb. 4	18 32·6	21 13	0·4548	21 34·7	261 22	2 41	0·3332
8	18 41·4	21 11	0·4505	21 27·7	262 40	2 32	0·3334
12	18 50·1	21 7	0·4459	21 20·6	263 58	2 23	0·3336
16	18 58·7	21 1	0·4411	21 13·5	265 15	2 14	0·3338
20	19 7·3	20 54	0·4361	21 6·3	266 32	2 5	0·3340
24	19 15·8	20 45	0·4309	20 58·9	267 49	1 56	0·3342
28	19 24·1	20 36	0·4254	20 51·5	269 7	1 47	0·3344
March 4	19 32·3	20 25	0·4197	20 43·9	270 24	1 37	0·3347
8	19 40·4	20 13	0·4138	20 36·2	271 41	1 28	0·3350
12	19 48·4	20 0	0·4077	20 28·5	272 58	1 19	0·3353
16	19 56·3	19 46	0·4013	20 20·6	274 14	1 10	0·3356
20	20 4·1	19 31	0·3946	20 12·5	275 31	1 0	0·3359
24	20 11·7	19 16	0·3877	20 4·3	276 47	0 50	0·3362
28	20 19·1	19 0	0·3806	19 56·0	278 4	0 40	0·3366
April 1	20 26·4	18 44	0·3732	19 47·5	279 20	0 31	0·3369
5	20 33·5	18 28	0·3656	19 38·8	280 36	0 21	0·3373
9	20 40·4	18 11	0·3577	19 29·9	281 52	0 12	0·3377
13	20 47·2	17 54	0·3496	19 20·8	283 8	N. 0 3	0·3381
17	20 53·8	17 37	0·3413	19 11·6	284 24	S. 0 7	0·3385
21	21 0·1	17 21	0·3327	19 2·2	285 39	0 17	0·3390
25	21 6·2	17 5	0·3238	18 52·5	286 54	0 26	0·3395
29	21 12·1	16 50	0·3147	18 42·6	288 9	0 35	0·3400
May 3	21 17·8	S. 16 37	0·3055	18 32·5	289 24	S. 0 45	0·3405

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1855.	h m	° ′		h m	° ′	° ′	
May 3	21 17·8	S. 16 37	0·3055	18 32·5	289 24	S. 0 45	0·3405
7	21 23·2	16 23	0·2960	18 22·3	290 39	0 54	0·3409
11	21 28·5	16 11	0·2863	18 11·7	291 54	1 4	0·3414
15	21 33·5	16 1	0·2763	18 0·8	293 9	1 13	0·3420
19	21 38·1	15 52	0·2661	17 49·6	294 23	1 22	0·3425
23	21 42·4	15 44	0·2558	17 38·2	295 37	1 31	0·3430
27	21 46·5	15 39	0·2454	17 26·3	296 51	1 40	0·3436
31	21 50·2	15 36	0·2348	17 14·2	298 5	1 49	0·3442
June 4	21 53·5	15 35	0·2242	17 1·8	299 18	1 58	0·3448
8	21 56·5	15 36	0·2136	16 48·9	300 32	2 7	0·3454
12	21 59·0	15 41	0·2029	16 35·7	301 45	2 16	0·3460
16	22 1·2	15 48	0·1923	16 22·0	302 58	2 24	0·3466
20	22 2·9	15 58	0·1818	16 7·9	304 11	2 33	0·3472
24	22 4·1	16 10	0·1715	15 53·4	305 24	2 41	0·3478
28	22 4·9	16 26	0·1615	15 38·3	306 36	2 50	0·3485
July 2	22 5·2	16 45	0·1519	15 22·8	307 49	2 58	0·3491
6	22 5·0	17 7	0·1427	15 6·9	309 1	3 6	0·3498
10	22 4·3	17 32	0·1342	14 50·4	310 13	3 14	0·3504
14	22 3·1	17 59	0·1264	14 33·4	311 24	3 22	0·3511
18	22 1·5	18 29	0·1194	14 15·9	312 36	3 30	0·3518
22	21 59·4	19 0	0·1134	13 58·0	313 47	3 38	0·3525
26	21 56·8	19 33	0·1085	13 39·7	314 58	3 45	0·3532
30	21 53·9	20 7	0·1048	13 21·1	316 9	3 53	0·3539
Aug. 3	21 50·7	20 41	0·1023	13 2·1	317 20	4 0	0·3546
7	21 47·2	21 14	0·1010	12 42·8	318 30	4 7	0·3553
11	21 43·5	21 46	0·1012	12 23·4	319 40	4 14	0·3560
15	21 39·8	22 17	0·1027	12 4·0	320 50	4 21	0·3567
19	21 36·0	22 45	0·1056	11 44·6	322 0	4 28	0·3574
23	21 32·4	23 11	0·1099	11 25·3	323 10	4 35	0·3581
27	21 28·9	23 34	0·1155	11 6·1	324 20	4 41	0·3589
31	21 25·7	23 53	0·1222	10 47·2	325 29	4 48	0·3596
Sept. 4	21 22·9	S. 24 9	0·1300	10 28·7	326 37	S. 4 54	0·3604

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1855.	h m	° ′		h m	° ′	° ′	
Sept. 4	21 22·9	S. 24 9	0·1300	10 28·7	326 37	S. 4 54	0·3604
8	21 20·4	24 21	0·1387	10 10·5	327 46	5 0	0·3611
12	21 18·3	24 30	0·1482	9 52·8	328 55	5 6	0·3618
16	21 16·7	24 35	0·1585	9 35·6	330 3	5 12	0·3626
20	21 15·6	24 38	0·1693	9 18·8	331 11	5 18	0·3633
24	21 15·1	24 37	0·1806	9 2·5	332 19	5 24	0·3641
28	21 15·0	24 32	0·1923	8 46·8	333 27	5 29	0·3648
Oct. 2	21 15·4	24 26	0·2042	8 31·5	334 34	5 34	0·3656
6	21 16·2	24 16	0·2164	8 16·6	335 42	5 40	0·3663
10	21 17·6	24 5	0·2287	8 2·2	336 49	5 45	0·3671
14	21 19·3	23 50	0·2409	7 48·4	337 55	5 49	0·3678
18	21 21·5	23 34	0·2531	7 34·8	339 2	5 54	0·3686
22	21 24·1	23 16	0·2652	7 21·7	340 9	5 58	0·3693
26	21 27·1	22 56	0·2773	7 9·0	341 15	6 3	0·3700
30	21 30·4	22 34	0·2892	6 56·5	342 21	6 7	0·3708
Nov. 3	21 34·0	22 11	0·3009	6 44·4	343 27	6 12	0·3715
7	21 37·9	21 45	0·3124	6 32·6	344 32	6 16	0·3723
11	21 42·1	21 19	0·3237	6 21·1	345 38	6 19	0·3730
15	21 46·5	20 51	0·3347	6 9·8	346 42	6 23	0·3738
19	21 51·1	20 22	0·3454	5 58·7	347 48	6 26	0·3745
23	21 56·0	19 51	0·3559	5 47·8	348 53	6 30	0·3752
27	22 1·1	19 18	0·3661	5 37·1	349 57	6 33	0·3760
Dec. 1	22 6·3	18 45	0·3760	5 26·5	351 1	6 36	0·3767
5	22 11·6	18 10	0·3857	5 16·1	352 6	6 39	0·3774
9	22 17·1	17 35	0·3950	5 5·8	353 10	6 42	0·3781
13	22 22·7	16 58	0·4041	4 55·7	354 14	6 45	0·3788
17	22 28·4	16 21	0·4128	4 45·6	355 17	6 47	0·3795
21	22 34·2	15 43	0·4212	4 35·7	356 21	6 50	0·3802
25	22 40·1	15 3	0·4294	4 25·9	357 24	6 52	0·3809
29	22 46·1	14 23	0·4372	4 16·2	358 27	6 54	0·3816
33	22 52·1	S. 13 42	0·4447	4 6·5	359 29	S. 6 56	0·3823

EPHEMERIS OF VESTA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
May	15	21 34 21·24	+ 2·95	S. 15 58 47·6	+ 5·9	4·5
	16	21 35 31·60	2·91	15 56 27·7	5·7	4·6
	17	21 36 40·86	2·86	15 54 14·1	5·4	4·6
	18	21 37 49·00	2·82	15 52 6·8	5·2	4·6
	19	21 38 56·01	2·77	15 50 6·0	4·9	4·6
	20	21 40 1·88	2·72	15 48 11·9	4·6	4·7
	21	21 41 6·58	2·67	15 46 24·7	4·3	4·7
	22	21 42 10·11	2·62	15 44 44·6	4·0	4·7
	23	21 43 12·46	2·57	15 43 11·7	3·7	4·8
	24	21 44 13·61	2·52	15 41 46·1	3·4	4·8
	25	21 45 13·55	2·47	15 40 28·0	3·1	4·8
	26	21 46 12·25	2·42	15 39 17·6	2·8	4·8
	27	21 47 9·71	2·37	15 38 15·1	2·4	4·9
	28	21 48 5·92	2·32	15 37 20·6	2·1	4·9
	29	21 49 0·85	2·26	15 36 34·2	1·8	4·9
	30	21 49 54·49	2·21	15 35 56·2	1·4	5·0
	31	21 50 46·81	2·15	15 35 26·7	1·0	5·0
June	1	21 51 37·79	2·10	15 35 5·9	0·7	5·0
	2	21 52 27·43	2·04	15 34 53·9	+ 0·3	5·1
	3	21 53 15·70	1·98	15 34 50·9	− 0·1	5·1
	4	21 54 2·57	1·92	15 34 57·1	0·5	5·1
	5	21 54 48·02	1·86	15 35 12·7	0·8	5·2
	6	21 55 32·04	1·80	15 35 37·8	1·2	5·2
	7	21 56 14·61	1·74	15 36 12·6	1·7	5·2
	8	21 56 55·70	1·68	15 36 57·3	2·1	5·2
	9	21 57 35·28	1·62	15 37 52·0	2·5	5·3
	10	21 58 13·35	1·55	15 38 56·9	2·9	5·3
	11	21 58 49·88	1·49	15 40 12·1	3·4	5·3
	12	21 59 24·85	1·42	15 41 37·7	3·8	5·4
	13	21 59 58·25	1·36	15 43 13·9	4·2	5·4
	14	22 0 30·05	+ 1·29	S. 15 45 0·8	− 4·7	5·4

EPHEMERIS OF VESTA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
June	14	22 0 30·05	+ 1·29	S. 15 45 0·8	— 4·7	5·4
	15	22 1 0·23	1·22	15 46 58·4	5·1	5·5
	16	22 1 28·78	1·16	15 49 7·0	5·6	5·5
	17	22 1 55·69	1·09	15 51 26·5	6·0	5·5
	18	22 2 20·93	1·02	15 53 57·1	6·5	5·6
	19	22 2 44·50	0·95	15 56 38·8	7·0	5·6
	20	22 3 6·38	0·88	15 59 31·7	7·4	5·6
	21	22 3 26·56	0·80	16 2 35·7	7·9	5·7
	22	22 3 45·02	0·73	16 5 51·0	8·4	5·7
	23	22 4 1·76	0·66	16 9 17·6	8·8	5·7
	24	22 4 16·75	0·59	16 12 55·5	9·3	5·8
	25	22 4 29·99	0·51	16 16 44·6	9·8	5·8
	26	22 4 41·46	0·44	16 20 44·9	10·2	5·8
	27	22 4 51·16	0·37	16 24 56·5	10·7	5·9
	28	22 4 59·06	0·29	16 29 19·3	11·2	5·9
	29	22 5 5·16	0·22	16 33 53·3	11·7	5·9
	30	22 5 9·45	0·14	16 38 38·5	12·1	6·0
July	1	22 5 11·91	+ 0·07	16 43 34·8	12·6	6·0
	2	22 5 12·53	— 0·01	16 48 42·2	13·0	6·0
	3	22 5 11·32	0·09	16 54 0·6	13·5	6·1
	4	22 5 8·26	0·17	16 59 29·8	13·9	6·1
	5	22 5 3·34	0·24	17 5 9·7	14·4	6·1
	6	22 4 56·56	0·32	17 11 0·2	14·8	6·2
	7	22 4 47·92	0·40	17 17 1·2	15·3	6·2
	8	22 4 37·41	0·48	17 23 12·5	15·7	6·2
	9	22 4 25·03	0·55	17 29 33·8	16·1	6·3
	10	22 4 10·79	0·63	17 36 4·9	16·5	6·3
	11	22 3 54·70	0·71	17 42 45·6	16·9	6·3
	12	22 3 36·78	0·78	17 49 35·6	17·3	6·4
	13	22 3 17·04	0·86	17 56 34·6	17·6	6·4
	14	22 2 55·48	— 0·94	S. 18 3 42·2	— 18·0	6·4

EPHEMERIS OF VESTA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
ıly	14	22 2 55·48	— 0·94	S. 18 3 42·2	— 18·0	6·4
	15	22 2 32·12	1·01	18 10 58·1	18·3	6·4
	16	22 2 7·00	1·08	18 18 22·1	18·7	6·5
	17	22 1 40·14	1·16	18 25 53·5	19·0	6·5
	18	22 1 11·56	1·23	18 33 32·0	19·2	6·5
	19	22 0 41·30	1·30	18 41 17·1	19·5	6·5
	20	22 0 9·39	1·36	18 49 8·5	19·8	6·6
	21	21 59 35·87	1·43	18 57 5·6	20·0	6·6
	22	21 59 0·76	1·49	19 5 8·0	20·2	6·6
	23	21 58 24·12	1·56	19 13 15·1	20·4	6·6
	24	21 57 45·97	1·62	19 21 26·5	20·6	6·7
	25	21 57 6·36	1·68	19 29 41·5	20·7	6·7
	26	21 56 25·34	1·74	19 37 59·8	20·8	6·7
	27	21 55 42·97	1·80	19 46 20·7	20·9	6·7
	28	21 54 59·27	1·85	19 54 43·8	21·0	6·7
	29	21 54 14·31	1·90	20 3 8·4	21·0	6·8
	30	21 53 28·13	1·95	20 11 34·0	21·1	6·8
	31	21 52 40·80	2·00	20 20 0·0	21·1	6·8
ugust	1	21 51 52·37	2·04	20 28 25·9	21·1	6·8
	2	21 51 2·91	2·08	20 36 51·2	21·0	6·8
	3	21 50 12·47	2·12	20 45 15·2	21·0	6·8
	4	21 49 21·12	2·16	20 53 37·3	20·9	6·8
	5	21 48 28·94	2·19	21 1 56·9	20·8	6·8
	6	21 47 36·00	2·22	21 10 13·4	20·6	6·8
	7	21 46 42·37	2·25	21 18 26·3	20·4	6·8
	8	21 45 48·12	2·27	21 26 34·9	20·3	6·8
	9	21 44 53·34	2·29	21 34 38·7	20·0	6·8
	10	21 43 58·11	2·31	21 42 37·1	19·8	6·8
	11	21 43 2·52	2·32	21 50 29·5	19·5	6·8
	12	21 42 6·65	2·33	21 58 15·2	19·3	6·8
?	13	21 41 10·59	— 2·34	S. 22 5 53·8	— 18·9	6·8

EPHEMERIS OF VESTA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
August	13	21 41 10·59	— 2·34	S.22 5 53·8	— 18·9	6·8
	14	21 40 14·42	2·34	22 13 24·7	18·6	6·8
	15	21 39 18·24	2·34	22 20 47·5	18·3	6·8
	16	21 38 22·13	2·33	22 28 1·6	17·9	6·8
	17	21 37 26·18	2·33	22 35 6·6	17·5	6·7
	18	21 36 30·48	2·31	22 42 2·0	17·1	6·7
	19	21 35 35·10	2·30	22 48 47·5	16·7	6·7
	20	21 34 40·14	2·28	22 55 22·6	16·2	6·7
	21	21 33 45·67	2·26	23 1 46·9	15·8	6·7
	22	21 32 51·77	2·23	23 8 0·3	15·3	6·7
	23	21 31 58·52	2·20	23 14 2·3	14·8	6·7
	24	21 31 5·99	2·17	23 19 52·7	14·4	6·6
	25	21 30 14·25	2·14	23 25 31·3	13·9	6·6
	26	21 29 23·38	2·10	23 30 57·8	13·3	6·6
	27	21 28 33·44	2·06	23 36 12·0	12·8	6·6
	28	21 27 44·49	2·02	23 41 13·8	12·3	6·5
	29	21 26 56·61	1·97	23 46 3·0	11·8	6·5
	30	21 26 9·85	1·92	23 50 39·5	11·3	6·5
	31	21 25 24·26	1·87	23 55 3·2	10·7	6·5
September	1	21 24 39·91	1·82	23 59 13·9	10·1	6·4
	2	21 23 56·86	1·77	24 3 11·6	9·6	6·4
	3	21 23 15·16	1·71	24 6 56·3	9·1	6·4
	4	21 22 34·86	1·65	24 10 27·8	8·5	6·4
	5	21 21 56·01	1·59	24 13 46·2	8·0	6·3
	6	21 21 18·67	1·52	24 16 51·5	7·4	6·3
	7	21 20 42·88	1·46	24 19 43·6	6·9	6·3
	8	21 20 8·68	1·39	24 22 22·7	6·4	6·2
	9	21 19 36·11	1·32	24 24 48·7	5·8	6·2
	10	21 19 5·21	1·25	24 27 1·6	5·3	6·2
	11	21 18 36·02	1·18	24 29 1·6	4·7	6·1
	12	21 18 8·57	— 1·11	S.24 30 48·8	— 4·2	6·1

EPHEMERIS OF VESTA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.	h m s	s	° ′ ″	″	″
tember 12	21 18 8·57	— 1·11	S. 24 30 48·8	— 4·2	6·1
13	21 17 42·89	1·03	24 32 23·1	3·7	6·1
14	21 17 18·99	0·96	24 33 44·8	3·1	6·0
15	21 16 56·90	0·88	24 34 53·9	2·6	6·0
16	21 16 36·64	0·81	24 35 50·6	2·1	6·0
17	21 16 18·22	0·73	24 36 35·0	1·6	5·9
18	21 16 1·66	0·65	24 37 7·2	1·1	5·9
19	21 15 46·96	0·57	24 37 27·4	0·6	5·8
20	21 15 34·13	0·50	24 37 35·8	— 0·1	5·8
21	21 15 23·17	0·42	24 37 32·6	+ 0·4	5·8
22	21 15 14·08	0·34	24 37 17·9	0·8	5·7
23	21 15 6·85	0·26	24 36 51·9	1·3	5·7
24	21 15 1·49	0·18	24 36 14·8	1·8	5·7
25	21 14 57·98	0·11	24 35 26·8	2·2	5·6
26	21 14 56·33	— 0·03	24 34 28·1	2·7	5·6
27	21 14 56·52	+ 0·05	24 33 18·8	3·1	5·5
28	21 14 58·54	0·12	24 31 59·1	3·5	5·5
29	21 15 2·38	0·20	24 30 29·2	4·0	5·5
30	21 15 8·04	0·27	24 28 49·2	4·4	5·4
ober 1	21 15 15·49	0·35	24 26 59·4	4·8	5·4
2	21 15 24·73	0·42	24 24 59·8	5·2	5·4
3	21 15 35·75	0·50	24 22 50·6	5·6	5·3
4	21 15 48·54	0·57	24 20 31·9	6·0	5·3
5	21 16 3·07	0·64	24 18 3·9	6·4	5·2
6	21 16 19·34	0·71	24 15 26·7	6·7	5·2
7	21 16 37·34	0·79	24 12 40·5	7·1	5·2
8	21 16 57·04	0·86	24 9 45·3	7·5	5·1
9	21 17 18·43	0·93	24 6 41·4	7·8	5·1
10	21 17 41·49	1·00	24 3 28·9	8·2	5·1
11	21 18 6·19	1·06	24 0 7·9	8·6	
12	21 18 32·52	+ 1·13	S. 23 56 38·5	+ 8·9	

EPHEMERIS OF VESTA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.	h m s	s	° ′ ″	″	″
October 12	21 18 32·52	+ 1·13	S. 23 56 38·5	+ 8·9	5·0
13	21 19 0·47	1·20	23 53 0·9	9·2	5·0
14	21 19 30·00	1·26	23 49 15·3	9·6	4·9
15	21 20 1·08	1·33	23 45 21·7	9·9	4·9
16	21 20 33·70	1·39	23 41 20·3	10·2	4·9
17	21 21 7·84	1·45	23 37 11·2	10·5	4·8
18	21 21 43·47	1·52	23 32 54·5	10·9	4·8
19	21 22 20·56	1·58	23 28 30·3	11·2	4·8
20	21 22 59·08	1·63	23 23 58·9	11·5	4·7
21	21 23 39·01	1·69	23 19 20·2	11·8	4·7
22	21 24 20·32	1·75	23 14 34·4	12·1	4·7
23	21 25 2·99	1·81	23 9 41·7	12·3	4·6
24	21 25 46·98	1·86	23 4 42·1	12·6	4·6
25	21 26 32·28	1·91	22 59 35·8	12·9	4·6
26	21 27 18·85	1·97	22 54 22·9	13·2	4·5
27	21 28 6·68	2·02	22 49 3·4	13·4	4·5
28	21 28 55·74	2·07	22 43 37·4	13·7	4·5
29	21 29 46·01	2·12	22 38 5·1	14·0	4·4
30	21 30 37·47	2·17	22 32 26·4	14·2	4·4
31	21 31 30·09	2·22	22 26 41·4	14·5	4·4
November 1	21 32 23·87	2·26	22 20 50·3	14·8	4·3
2	21 33 18·77	2·31	22 14 53·1	15·0	4·3
3	21 34 14·77	2·36	22 8 49·8	15·3	4·3
4	21 35 11·85	2·40	22 2 40·6	15·5	4·3
5	21 36 10·00	2·44	21 56 25·5	15·8	4·2
6	21 37 9·19	2·49	21 50 4·5	16·0	4·2
7	21 38 9·41	2·53	21 43 37·8	16·2	4·2
8	21 39 10·62	2·57	21 37 5·4	16·5	4·2
9	21 40 12·82	2·61	21 30 27·3	16·7	4·1
10	21 41 15·98	2·65	21 23 43·6	16·9	4·1
11	21 42 20·09	+ 2·69	S. 21 16 54·4	+ 17·2	4·1

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1854.	h m	° ′		h m	° ′	° ′	
Dec. 30	15 23·0	S. 10 4	0·5895	20 46·1	218 11	N. 9 40	0·5200
1855.							
Jan. 3	15 27·7	10 12	0·5848	20 35·1	218 45	9 45	0·5204
7	15 32·3	10 18	0·5798	20 23·9	219 19	9 50	0·5208
11	15 36·8	10 23	0·5746	20 12·6	219 53	9 55	0·5212
15	15 41·1	10 26	0·5690	20 1·2	220 27	10 0	0·5215
19	15 45·3	10 28	0·5632	19 49·6	221 1	10 5	0·5218
23	15 49·4	10 28	0·5571	19 37·9	221 35	10 10	0·5221
27	15 53·3	10 27	0·5507	19 26·1	222 9	10 15	0·5224
31	15 57·0	10 25	0·5441	19 14·1	222 43	10 19	0·5227
Feb. 4	16 0·5	10 21	0·5373	19 1·9	223 17	10 24	0·5230
8	16 3·9	10 16	0·5302	18 49·4	223 50	10 29	0·5232
12	16 7·0	10 10	0·5230	18 36·7	224 24	10 33	0·5235
16	16 9·9	10 2	0·5156	18 23·8	224 58	10 37	0·5237
20	16 12·7	9 53	0·5079	18 10·8	225 32	10 42	0·5239
24	16 15·2	9 42	0·5001	17 57·5	226 5	10 47	0·5241
28	16 17·4	9 30	0·4922	17 43·9	226 39	10 51	0·5242
March 4	16 19·3	9 16	0·4842	17 30·0	227 13	10 55	0·5244
8	16 20·9	9 2	0·4761	17 15·9	227 47	10 59	0·5245
12	16 22·3	8 46	0·4680	17 1·4	228 21	11 3	0·5247
16	16 23·3	8 29	0·4599	16 46·7	228 55	11 7	0·5248
20	16 24·0	8 11	0·4518	16 31·6	229 28	11 11	0·5249
24	16 24·5	7 51	0·4439	16 16·2	230 2	11 15	0·5250
28	16 24·5	7 31	0·4361	16 0·5	230 35	11 19	0·5251
April 1	16 24·2	7 10	0·4285	15 44·4	231 9	11 23	0·5252
5	16 23·6	6 48	0·4211	15 28·0	231 42	11 26	0·5253
9	16 22·6	6 26	0·4140	15 11·3	232 16	11 30	0·5253
13	16 21·3	6 3	0·4073	14 54·3	232 50	11 34	0·5253
17	16 19·7	5 41	0·4011	14 36·9	233 24	11 37	0·5253
21	16 17·8	5 18	0·3954	14 19·1	233 58	11 41	0·5253
25	16 15·6	4 55	0·3903	14 1·2	234 31	11 45	0·5253
29	16 13·1	4 33	0·3858	13 42·9	235 5	11 48	0·5252
May 3	16 10·3	S. 4 11	0·3819	13 24·4	235 39	N. 11 51	0·5252

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1855.	h m	° ′		h m	° ′	° ′	
May 3	16 10·3	S. 4 11	0·3819	13 24·4	235 39	N. 11 51	0·5252
7	16 7·4	3 51	0·3788	13 5·8	236 13	11 54	0·5252
11	16 4·3	3 31	0·3766	12 47·0	236 47	11 57	0·5251
15	16 1·1	3 13	0·3751	12 28·0	237 21	12 0	0·5250
19	15 57·8	2 57	0·3745	12 9·0	237 55	12 3	0·5249
23	15 54·5	2 43	0·3746	11 50·0	238 29	12 6	0·5248
27	15 51·2	2 30	0·3756	11 31·0	239 3	12 9	0·5246
31	15 48·0	2 20	0·3775	11 12·1	239 37	12 12	0·5245
June 4	15 44·8	2 12	0·3801	10 53·3	240 11	12 15	0·5244
8	15 41·9	2 6	0·3833	10 34·6	240 45	12 17	0·5242
12	15 39·1	2 2	0·3873	10 16·1	241 19	12 20	0·5240
16	15 36·5	2 1	0·3919	9 57·8	241 53	12 22	0·5238
20	15 34·1	2 2	0·3971	9 39·8	242 27	12 24	0·5236
24	15 32·1	2 5	0·4029	9 22·1	243 1	12 27	0·5234
28	15 30·3	2 11	0·4090	9 4·6	243 35	12 29	0·5232
July 2	15 28·8	2 18	0·4156	8 47·4	244 10	12 31	0·5229
6	15 27·7	2 27	0·4225	8 30·6	244 44	12 33	0·5226
10	15 26·8	2 38	0·4296	8 14·1	245 19	12 35	0·5223
14	15 26·3	2 51	0·4369	7 57·8	245 53	12 37	0·5220
18	15 26·1	3 5	0·4444	7 41·9	246 27	12 39	0·5217
22	15 26·2	3 21	0·4519	7 26·3	247 2	12 41	0·5214
26	15 26·6	3 37	0·4596	7 11·0	247 37	12 43	0·5210
30	15 27·3	3 55	0·4672	6 56·0	248 12	12 45	0·5207
Aug. 3	15 28·3	4 14	0·4748	6 41·3	248 47	12 47	0·5203
7	15 29·6	4 33	0·4824	6 26·9	249 22	12 48	0·5199
11	15 31·2	4 54	0·4899	6 12·7	249 57	12 49	0·5195
15	15 33·0	5 14	0·4973	5 58·8	250 32	12 51	0·5191
19	15 35·1	5 36	0·5046	5 45·2	251 7	12 52	0·5187
23	15 37·4	5 58	0·5118	5 31·8	251 42	12 53	0·5183
27	15 40·0	6 20	0·5187	5 18·6	252 17	12 55	0·5178
31	15 42·8	6 42	0·5254	5 5·7	252 53	12 56	0·5173
Sept. 4	15 45·9	S. 7 4	0·5319	4 53·0	253 28	N. 12 57	0·5168

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1855.	h m	° ′		h m	° ′	° ′	
Sept. 4	15 45·9	S. 7 4	0·5319	4 53·0	253 28	N. 12 57	0·5168
8	15 49·0	7 26	0·5382	4 40·5	254 4	12 58	0·5163
12	15 52·4	7 48	0·5444	4 28·2	254 39	12 59	0·5158
16	15 56·0	8 10	0·5503	4 16·0	255 15	13 0	0·5153
20	15 59·8	8 31	0·5560	4 4·0	255 51	13 0	0·5148
24	16 3·7	8 53	0·5615	3 52·2	256 26	13 1	0·5142
28	16 7·8	9 14	0·5666	3 40·6	257 2	13 2	0·5136
Oct. 2	16 12·1	9 35	0·5715	3 29·1	257 38	13 2	0·5130
6	16 16·5	9 55	0·5763	3 17·7	258 15	13 3	0·5124
10	16 21·0	10 14	0·5807	3 6·5	258 51	13 3	0·5118
14	16 25·7	10 33	0·5848	2 55·5	259 27	13 3	0·5112
18	16 30·5	10 52	0·5887	2 44·5	260 4	13 3	0·5105
22	16 35·4	11 9	0·5924	2 33·7	260 40	13 3	0·5099
26	16 40·4	11 26	0·5957	2 23·0	261 17	13 3	0·5092
30	16 45·6	11 42	0·5989	2 12·4	261 54	13 3	0·5085
Nov. 3	16 50·8	11 57	0·6017	2 2·0	262 31	13 3	0·5078
7	16 56·2	12 11	0·6042	1 51·5	263 8	13 3	0·5071
11	17 1·6	12 24	0·6065	1 41·1	263 45	13 3	0·5064
15	17 7·1	12 36	0·6085	1 30·9	264 22	13 2	0·5056
19	17 12·7	12 48	0·6102	1 20·7	265 0	13 2	0·5048
23	17 18·3	12 58	0·6117	1 10·6	265 37	13 1	0·5041
27	17 24·0	13 7	0·6129	1 0·6	266 15	13 0	0·5032
Dec. 1	17 29·8	13 15	0·6138	0 50·6	266 53	12 59	0·5024
5	17 35·6	13 22	0·6145	0 40·7	267 31	12 59	0·5016
9	17 41·5	13 27	0·6148	0 30·8	268 9	12 58	0·5008
13	17 47·5	13 32	0·6148	0 20·9	268 47	12 57	0·4999
17	17 53·4	13 35	0·6147	0 11·0	269 25	12 55	0·4990
21	17 59·3	13 37	0·6142	{0 / 23 / {1·2 / 58·7}	270 4	12 54	0·4981
25	18 5·3	13 38	0·6134	23 49·0	270 43	12 53	0·4972
29	18 11·3	13 38	0·6124	23 39·4	271 22	12 51	0·4963
33	18 17·4	S. 13 36	0·6110	23 29·7	272 1	N. 12 49	0·4

EPHEMERIS OF JUNO FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
February	18	16 11 52·73	+ 1·66	S. 9 55 36·7	+ 6·0	2·7
	19	16 12 32·15	1·62	9 53 10·8	6·2	2·7
	20	16 13 10·66	1·59	9 50 39·7	6·4	2·7
	21	16 13 48·23	1·55	9 48 3·5	6·6	2·7
	22	16 14 24·87	1·51	9 45 22·2	6·8	2·7
	23	16 15 0·55	1·47	9 42 35·9	7·0	2·7
	24	16 15 35·27	1·43	9 39 44·5	7·2	2·7
	25	16 16 9·02	1·39	9 36 48·1	7·4	2·7
	26	16 16 41·78	1·35	9 33 46·6	7·6	2·7
	27	16 17 13·54	1·30	9 30 40·2	7·9	2·8
	28	16 17 44·30	1·26	9 27 28·9	8·1	2·8
March	1	16 18 14·04	1·22	9 24 12·7	8·3	2·8
	2	16 18 42·75	1·17	9 20 51·5	8·5	2·8
	3	16 19 10·41	1·13	9 17 25·6	8·7	2·8
	4	16 19 37·02	1·09	9 13 54·8	8·9	2·8
	5	16 20 2·56	1·04	9 10 19·3	9·1	2·8
	6	16 20 27·03	1·00	9 6 39·0	9·3	2·8
	7	16 20 50·40	0·95	9 2 54·1	9·5	2·8
	8	16 21 12·67	0·91	8 59 4·4	9·7	2·9
	9	16 21 33·82	0·86	8 55 10·1	9·9	2·9
	10	16 21 53·83	0·81	8 51 11·2	10·0	2·9
	11	16 22 12·70	0·76	8 47 7·8	10·2	2·9
	12	16 22 30·42	0·71	8 42 59·8	10·4	2·9
	13	16 22 46·97	0·66	8 38 47·4	10·6	2·9
	14	16 23 2·35	0·62	8 34 30·7	10·8	3·0
	15	16 23 16·54	0·57	8 30 9·7	11·0	3·0
	16	16 23 29·53	0·52	8 25 44·4	11·1	3·0
	17	16 23 41·31	0·47	8 21 15·1	11·3	3·0
	18	16 23 51·88	0·41	8 16 41·6	11·5	3·0
	19	16 24 1·22	0·36	8 12 4 2	11·6	3·0
	20	16 24 9·34	+ 0·31	S. 8 7 22·9	+ 11·8	3·0

EPHEMERIS OF JUNO FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
March	20	16 24 9·34	+ 0·31	S. 8 7 22·9	+ 11·8	3·0
	21	16 24 16·22	0·26	8 2 37·7	12·0	3·0
	22	16 24 21·86	0·20	7 57 48·9	12·1	3·1
	23	16 24 26·25	0·15	7 52 56·4	1·32	3·1
	24	16 24 29·39	0·10	7 48 0·4	12·4	3·1
	25	16 24 31·28	+ 0·05	7 43 1·0	12·6	3·1
	26	16 24 31·91	0·00	7 37 58·2	12·7	3·1
	27	16 24 31·28	− 0·05	7 32 52·3	12·8	3·1
	28	16 24 29·38	0·10	7 27 43·3	13·0	3·1
	29	16 24 26·23	0·16	7 22 31·3	13·1	3·2
	30	16 24 21·80	0·21	7 17 16·4	13·2	3·2
	31	16 24 16·11	0·26	7 11 58·7	13·3	3·2
April	1	16 24 9·15	0·32	7 6 38·5	13·4	3·2
	2	16 24 0·92	0·37	7 1 15·6	13·5	3·2
	3	16 23 51·42	0·42	6 55 50·4	13·6	3·2
	4	16 23 40·65	0·48	6 50 22·9	13·7	3·2
	5	16 23 28·62	0·53	6 44 53·3	13·8	3·3
	6	16 23 15·32	0·58	6 39 21·6	13·8	3·3
	7	16 23 0·75	0·64	6 33 48·1	13·9	3·3
	8	16 22 44·92	0·69	6 28 12·9	14·0	3·3
	9	16 22 27·84	0·74	6 22 36·2	14·0	3·3
	10	16 22 9·50	0·79	6 16 58·0	14·1	3·3
	11	16 21 49·92	0·84	6 11 18·7	14·1	3·3
	12	16 21 29·10	0·89	6 5 38·3	14·2	3·3
	13	16 21 7·06	0·94	5 59 57·1	14·2	3·4
	14	16 20 43·81	0·99	5 54 15·2		3·4
	15	16 20 19·36	1·04	5 48 32·9		3·4
	16	16 19 53·72	1·09	5 42 50·2		3
	17	16 19 26·91	1·14	5 37 7·5		
	18	16 18 58·96	1·19	5 31 25·0		
	19	16 18 29·87	− 1·24	S. 5 25 42·8		

EPHEMERIS OF JUNO FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
April	19	16 18 29·87	−1·24	S. 5 25 42·8	+14·2	3·5
	20	16 17 59·66	1·28	5 20 1·2	14·2	3·5
	21	16 17 28·37	1·33	5 14 20·3	14·1	3·5
	22	16 16 56·01	1·37	5 8 40·5	14·1	3·5
	23	16 16 22·60	1·41	5 3 2·0	14·0	3·5
	24	16 15 48·18	1·46	4 57 24·9	14·0	3·5
	25	16 15 12·76	1·50	4 51 49·4	13·9	3·5
	26	16 14 36·37	1·54	4 46 15·7	13·8	3·5
	27	16 13 59·04	1·58	4 40 44·2	13·8	3·5
	28	16 13 20·80	1·61	4 35 15·0	13·7	3·5
	29	16 12 41·67	1·64	4 29 48·2	13·6	3·5
	30	16 12 1·68	1·68	4 24 24·2	13·5	3·5
May	1	16 11 20·87	1·72	4 19 3·0	13·3	3·5
	2	16 10 39·26	1·75	4 13 45·1	13·2	3·6
	3	16 9 56·88	1·78	4 8 30·5	13·0	3·6
	4	16 9 13·77	1·81	4 3 19·4	12·9	3·6
	5	16 8 29·95	1·84	3 58 12·2	12·7	3·6
	6	16 7 45·46	1·87	3 53 9·0	12·6	3·6
	7	16 7 0·35	1·89	3 48 10·0	12·4	3·6
	8	16 6 14·64	1·92	3 43 15·5	12·2	3·6
	9	16 5 28·37	1·94	3 38 25·7	12·0	3·6
	10	16 4 41·58	1·96	3 33 40·8	11·8	3·6
	11	16 3 54·31	1·98	3 29 1·1	11·6	3·6
	12	16 3 6·61	2·00	3 24 26·7	11·4	3·6
	13	16 2 18·51	2·01	3 19 57·8	11·1	3·6
	14	16 1 30·07	2·03	3 15 34·8	10·9	3·6
	15	16 0 41·31	2·04	3 11 17·8	10·6	3·6
	16	15 59 52·30	2·05	3 7 7·1	10·3	3·6
	17	15 59 3·06	2·06	3 3 2·7	10·0	3·6
	18	15 58 13·66	2·06	2 59 5·0	9·8	3·6
☿	19	15 57 24·12	−2·07	S. 2 55 14·0	+9·5	3·6

EPHEMERIS OF JUNO FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.		Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″		″	″
May	19	15 57 24·12	— 2·07	S. 2 55 14·0	+	9·5	3·6
	20	15 56 34·51	2·07	2 51 30·0		9·2	3·6
	21	15 55 44·86	2·07	2 47 53·1		8·9	3·6
	22	15 54 55·22	2·07	2 44 23·4		8·6	3·6
	23	15 54 5·63	2·07	2 41 1·2		8·3	3·6
	24	15 53 16·13	2·06	2 37 46·4		8·0	3·6
	25	15 52 26·77	2·05	2 34 39·4		7·6	3·6
	26	15 51 37·59	2·04	2 31 40·1		7·3	3·6
	27	15 50 48·63	2·03	2 28 48·7		7·0	3·6
	28	15 49 59·93	2·02	2 26 5·2		6·6	3·6
	29	15 49 11·54	2·01	2 23 29·8		6·3	3·6
	30	15 48 23·48	2·00	2 21 2·6		6·0	3·6
	31	15 47 35·80	1·98	2 18 43·5		5·6	3·6
June	1	15 46 48·54	1·96	2 16 32·8		5·3	3·6
	2	15 46 1·72	1·94	2 14 30·4		5·0	3·6
	3	15 45 15·40	1·92	2 12 36·4		4·6	3·6
	4	15 44 29·60	1·90	2 10 50·9		4·3	3·6
	5	15 43 44·36	1·87	2 9 13·8		3·9	3·6
	6	15 42 59·71	1·85	2 7 45·4		3·5	3·6
	7	15 42 15·70	1·82	2 6 25·5		3·1	3·6
	8	15 41 32·35	1·79	2 5 14·2		2·8	3·5
	9	15 40 49·70	1·76	2 4 11·6		2·4	3·5
	10	15 40 7·79	1·73	2 3 17·7		2·0	3·5
	11	15 39 26·64	1·70	2 2 32·4		1·7	3·5
	12	15 38 46·28	1·66	2 1 55·7		1·3	3·5
	13	15 38 6·75	1·63	2 1 27·8		1·0	3·5
	14	15 37 28·08	1·60	2 1 8·4		0 6	3·5
	15	15 36 50·29	1·56	2 0 57·7	+		5
	16	15 36 13·41	1·52	2 0 55·6	—		
	17	15 35 37·47	1·48	2 1 2·0			
	18	15 35 2·48	— 1·44	S. 2 1 16 8	—		

EPHEMERIS OF JUNO FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
June	18	15 35 2·48	— 1·44	S. 2 1 16·8	— 0·8	3·5
	19	15 34 28·48	1·40	2 1 40·1	1·2	3·5
	20	15 33 55·48	1·35	2 2 11·6	1·5	3·4
	21	15 33 23·51	1·31	2 2 51·4	1·8	3·4
	22	15 32 52·57	1·26	2 3 39·3	2·2	3·4
	23	15 32 22·69	1·22	2 4 35·3	2·5	3·4
	24	15 31 53·88	1·18	2 5 39·2	2·8	3·4
	25	15 31 26·14	1·14	2 6 51·0	3·2	3·4
	26	15 30 59·50	1·09	2 8 10·6	3·5	3·4
	27	15 30 33·97	1·04	2 9 37·7	3·8	3·4
	28	15 30 9·55	1·00	2 11 12·4	4·1	3·3
	29	15 29 46·25	0·95	2 12 54·6	4·4	3·3
	30	15 29 24·09	0·90	2 14 44·0	4·7	3·3
July	1	15 29 3·07	0·86	2 16 40·7	5·0	3·3
	2	15 28 43·21	0·81	2 18 44·5	5·3	3·3
	3	15 28 24·50	0·76	2 20 55·2	5·6	3·3
	4	15 28 6·94	0·71	2 23 12·8	5·9	3·3
	5	15 27 50·55	0·66	2 25 37·2	6·1	3·3
	6	15 27 35·33	0·61	2 28 8·2	6·4	3·2
	7	15 27 21·28	0·56	2 30 45·8	6·6	3·2
	8	15 27 8·42	0·51	2 33 29·8	6·9	3·2
	9	15 26 56·75	0·46	2 36 20·1	7·2	3·2
	10	15 26 46·25	0·41	2 39 16·6	7·5	3·2
	11	15 26 36·95	0·36	2 42 19·2	7·7	3·2
	12	15 26 28·84	0·31	2 45 27·8	8·0	3·2
	13	15 26 21·91	0·26	2 48 42·1	8·3	3·1
	14	15 26 16·17	0·21	2 52 2·2	8·5	3·1
	15	15 26 11·63	0·16	2 55 27·9	8·7	3·1
	16	15 26 8·28	0·11	2 58 58·9	8·9	3·1
	17	15 26 6·11	0·07	3 2 35·3	9·1	3·1
	18	15 26 5·12	— 0·02	S. 3 6 16·8	— 9·3	3·1

EPHEMERIS OF JUNO FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor Par.
1855.		h m s	s	° ′ ″	″	″
ıly	18	15 26 5·12	− 0·02	S. 3 6 16·8	− 9·3	3·1
	19	15 26 5·31	+ 0·03	3 10 3·4	9·5	3·1
	20	15 26 6·67	0·08	3 13 54·8	9·7	3·0
	21	15 26 9·20	0·13	3 17 50·9	9·9	3·0
	22	15 26 12·88	0·18	3 21 51·6	10·1	3·0
	23	15 26 17·72	0·23	3 25 56·8	10·3	3·0
	24	15 26 23·70	0·27	3 30 6·3	10·5	3·0
	25	15 26 30·82	0·32	3 34 20·0	10·7	3·0
	26	15 26 39·06	0·36	3 38 37·8	10·9	3·0
	27	15 26 48·42	0·41	3 42 59·4	11·0	3·0
	28	15 26 58·88	0·46	3 47 24·9	11·2	2·9
	29	15 27 10·45	0·50	3 51 54·1	11·3	2·9
	30	15 27 23·12	0·55	3 56 26·9	11·4	2·9
	31	15 27 36·87	0·60	4 1 3·1	11·6	2·9
ıgust	1	15 27 51·70	0·64	4 5 42·7	11·7	2·9
	2	15 28 7·59	0·69	4 10 25·4	11·8	2·9
	3	15 28 24·55	0·73	4 15 11·3	12·0	2·9
	4	15 28 42·56	0·77	4 20 0·3	12·1	2·9
	5	15 29 1·62	0·82	4 24 52·1	12·2	2·8
	6	15 29 21·73	0·86	4 29 46·8	12·4	2·8
	7	15 29 42·86	0·90	4 34 44·2	12·5	2·8
	8	15 30 5·02	0·95	4 39 44·2	12·6	2·8
	9	15 30 28·20	0·99	4 44 46·8	12·7	2·8
	10	15 30 52·39	1·03	4 49 51·8	12·8	2·8
	11	15 31 17·58	1·07	4 54 59·0	12·8	2·8
	12	15 31 43·76	1·11	5 0 8·5	12·9	2·8
	13	15 32 10·92	1·15	5 5 20·0	13·0	2·8
	14	15 32 39·06	1·19	5 10 33·5	13·1	2·7
	15	15 33 8·16	1·23	5 15 48·9	13·2	2·7
	16	15 33 38·21	1·27	5 21 5·9	13·2	2·7
	17	15 34 9·21	+ 1·31	S. 5 26 24·7	− 13·3	

MEAN TIME.

Date.	Geocentric. Right Ascension. Noon.	Declination. Noon.	Log. of Dist. from the Earth. Noon.	Meridian Passage.	Heliocentric. Longitude. Noon.	Latitude. Noon.	Log. of Rad. Vect. Noon.
1854.	h m	° ′		h m	° ′	° ′	
Dec. 30	20 26·2	S. 1 9	0·6217	1 51·5	317 35	N.21 39	0·5339
1855.							
Jan. 3	20 31·1	1 9	0·6244	1 40·7	318 6	21 24	0·5336
7	20 36·2	1 8	0·6269	1 30·1	318 37	21 9	0·5333
11	20 41·5	1 5	0·6292	1 19·6	319 8	20 53	0·5330
15	20 46·8	1 1	0·6312	1 9·2	319 39	20 37	0·5328
19	20 52·0	0 56	0·6329	0 58·6	320 10	20 22	0·5325
23	20 57·2	0 49	0·6343	0 48·0	320 41	20 6	0·5322
27	21 2·4	0 42	0·6355	0 37·5	321 12	19 50	0·5318
31	21 7·6	0 33	0·6364	0 27·0	321 42	19 34	0·5315
Feb. 4	21 12·8	0 23	0·6370	0 16·5	322 13	19 17	0·5312
8	21 18·2	S. 0 12	0·6373	0 6·1	322 44	19 1	0·5308
12	21 23·5	0 0	0·6374	23 52·9	323 14	18 45	0·5304
16	21 28·7	N. 0 13	0·6371	23 42·3	323 45	18 28	0·5301
20	21 33·8	0 26	0·6366	23 31·7	324 15	18 12	0·5297
24	21 38·9	0 41	0·6358	23 21·1	324 46	17 55	0·5293
28	21 44·0	0 56	0·6347	23 10·5	325 16	17 38	0·5289
March 4	21 49·1	1 11	0·6333	22 59·8	325 46	17 21	0·5284
8	21 54·1	1 28	0·6317	22 49·1	326 17	17 4	0·5280
12	21 59·1	1 45	0·6297	22 38·3	326 47	16 47	0·5275
16	22 4·1	2 2	0·6275	22 27·5	327 17	16 30	0·5271
20	22 9·0	2 20	0·6250	22 16·6	327 48	16 12	0·5266
24	22 13·8	2 38	0·6221	22 5·7	328 18	15 55	0·5261
28	22 18·6	2 56	0·6190	21 54·7	328 48	15 37	0·5256
April 1	22 23·3	3 14	0·6157	21 43·6	329 18	15 19	0·5251
5	22 27·9	3 32	0·6120	21 32·5	329 48	15 2	0·5246
9	22 32·5	3 51	0·6080	21 21·3	330 18	14 44	0·5240
13	22 37·0	4 10	0·6038	21 10·0	330 48	14 26	0·5235
17	22 41·5	4 28	0·5992	20 58·7	331 18	14 7	0·5229
21	22 45·9	4 46	0·5944	20 47·4	331 49	13 49	0·5223
25	22 50·2	5 4	0·5892	20 35·9	332 19	13 31	0·5217
29	22 54·4	5 21	0·5838	20 24·3	332 49	13 12	0·5212
May 3	22 58·4	N. 5 38	0·5781	20 12·6	333 19	N.12 54	0·5205

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1855.	h m	° ′		h m	° ′	° ′	
May 3	22 58·4	N. 5 38	0·5781	20 12·6	333 19	N. 12 54	0·5205
7	23 2·3	5 55	0·5721	20 0·7	333 49	12 35	0·5199
11	23 6·2	6 11	0·5656	19 48·8	334 19	12 16	0·5192
15	23 9·9	6 26	0·5592	19 36·8	334 50	11 57	0·5186
19	23 13·4	6 41	0·5524	19 24·6	335 20	11 38	0·5179
23	23 16·9	6 54	0·5452	19 12·3	335 50	11 19	0·5172
27	23 20·3	7 7	0·5378	18 59·9	336 20	11 0	0·5165
31	23 23·5	7 18	0·5302	18 47·3	336 51	10 40	0·5158
June 4	23 26·5	7 28	0·5222	18 34·5	337 21	10 21	0·5151
8	23 29·4	7 37	0·5140	18 21·6	337 51	10 1	0·5143
12	23 32·1	7 44	0·5056	18 8·5	338 22	9 41	0·5136
16	23 34·6	7 49	0·4969	17 55·2	338 52	9 21	0·5128
20	23 36·8	7 52	0·4880	17 41·7	339 22	9 1	0·5121
24	23 38·7	7 54	0·4789	17 27·9	339 53	8 41	0·5113
28	23 40·5	7 54	0·4696	17 13·9	340 24	8 21	0·5106
July 2	23 42·2	7 51	0·4602	16 59·8	340 54	8 0	0·5097
6	23 43·4	7 47	0·4507	16 45·4	341 25	7 40	0·5089
10	23 44·5	7 39	0·4411	16 30·7	341 55	7 19	0·5081
14	23 45·4	7 29	0·4314	16 15·6	342 26	6 58	0·5072
18	23 45·8	7 16	0·4216	16 0·3	342 57	6 38	0·5064
22	23 46·0	7 0	0·4120	15 44·7	343 28	6 17	0·5055
26	23 46·0	6 40	0·4024	15 28·9	343 59	5 56	0·5046
30	23 45·5	6 17	0·3930	15 12·7	344 30	5 35	0·5037
Aug. 3	23 44·8	5 51	0·3839	14 56·2	345 1	5 13	0·5028
7	23 43·8	5 21	0·3750	14 39·4	345 33	4 52	0·5019
11	23 42·4	4 48	0·3666	14 22·2	346 4	4 31	0·5009
15	23 40·8	4 11	0·3587	14 4·8	346 36	4 9	0·5000
19	23 38·9	3 31	0·3513	13 47·2	347 8	3 47	0·4990
23	23 36·7	2 48	0·3447	13 29·3	347 40	3 25	0·4980
27	23 34·3	2 1	0·3387	13 11·2	348 12	3 3	0·4970
31	23 31·7	1 12	0·3333	12 52·8	348 44	2 41	0·4
Sept. 4	23 28·9	N. 0 21	0·3289	12 34·3	349 16	N. 2 19	

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
1855.	h m	° ′		h m	° ′	° ′	
Sept. 4	23 28·9	N. 0 21	0·3289	12 34·3	349 16	N. 2 19	0·4950
8	23 25·9	S. 0 33	0·3256	12 15·7	349 48	1 57	0·4939
12	23 23·0	1 28	0·3235	11 56·9	350 20	1 35	0·4929
16	23 19·9	2 23	0·3223	11 38·1	350 53	1 12	0·4918
20	23 16·9	3 19	0·3221	11 19·4	351 26	0 49	0·4908
24	23 14·0	4 15	0·3229	11 0·8	351 59	0 27	0·4897
28	23 11·1	5 9	0·3248	10 42·2	352 32	N. 0 4	0·4886
Oct. 2	23 8·5	6 2	0·3276	10 23·8	353 5	S. 0 19	0·4874
6	23 6·0	6 53	0·3314	10 5·7	353 38	0 42	0·4863
10	23 3·8	7 41	0·3360	9 47·8	354 12	1 6	0·4852
14	23 1·9	8 27	0·3413	9 30·2	354 46	1 29	0·4840
18	23 0·2	9 10	0·3474	9 12·9	355 20	1 53	0·4828
22	22 58·9	9 49	0·3540	8 55·9	355 54	2 16	0·4816
26	22 58·0	10 25	0·3611	8 39·2	356 28	2 40	0·4805
30	22 57·3	10 58	0·3687	8 22·9	357 3	3 4	0·4793
Nov. 3	22 57·1	11 27	0·3765	8 6·9	357 38	3 28	0·4780
7	22 57·2	11 53	0·3845	7 51·3	358 13	3 52	0·4768
11	22 57·6	12 15	0·3928	7 36·1	358 48	4 16	0·4755
15	22 58·5	12 34	0·4011	7 21·2	359 23	4 40	0·4743
19	22 59·6	12 49	0·4094	7 6·6	359 59	5 5	0·4730
23	23 1 0	13 2	0·4178	6 52·4	0 35	5 29	0·4717
27	23 2·9	13 12	0·4261	6 38·5	1 11	5 54	0·4704
Dec. 1	23 5·0	13 19	0·4343	6 24·9	1 48	6 18	0·4691
5	23 7·3	13 23	0·4423	6 11·6	2 25	6 43	0·4678
9	23 10·0	13 25	0·4501	5 58·6	3 2	7 8	0·4664
13	23 12·9	13 24	0·4577	5 45·8	3 40	7 33	0·4651
17	23 16·1	13 22	0·4652	5 33·3	4 17	7 58	0·4637
21	23 19·5	13 17	0·4724	5 21·0	4 55	8 24	0·4623
25	23 23·1	13 10	0·4793	5 8·9	5 33	8 49	0·4609
29	23 26·9	13 2	0·4859	4 57·0	6 12	9 14	0·4595
33	23 31·1	S. 12 51	0·4921	4 45·4	6 52	S. 9 40	0·4581

EPHEMERIS OF PALLAS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
ıe	15	23 34 18·19	+ 1·49	N. 7 48 13·2	+ 3·0	2·7
	16	23 34 53·45	1·45	7 49 21·9	2·7	2·7
	17	23 35 27·93	1·42	7 50 23·8	2·4	2·8
	18	23 36 1·62	1·39	7 51 18·8	2·1	2·8
	19	23 36 34·51	1·35	7 52 6·6	1·8	2·8
	20	23 37 6·60	1·32	7 52 47·0	1·5	2·8
	21	23 37 37·88	1·29	7 53 20·1	1·2	2·8
	22	23 38 8·33	1·25	7 53 45·8	0·9	2·8
	23	23 38 37·95	1·22	7 54 3·8	0·6	2·8
	24	23 39 6·72	1·18	7 54 14·0	+ 0·3	2·9
	25	23 39 34·64	1·15	7 54 16·4	− 0·1	2·9
	26	23 40 1·70	1·11	7 54 10·8	0·4	2·9
	27	23 40 27·89	1·07	7 53 57·0	0·7	2·9
	28	23 40 53·19	1·03	7 53 35·0	1·1	2·9
	29	23 41 17·59	1·00	7 53 4·6	1·5	2·9
	30	23 41 41·08	0·96	7 52 25·7	1·8	2·9
ly	1	23 42 3·64	0·92	7 51 38·0	2·2	3·0
	2	23 42 25·27	0·88	7 50 41·6	2·5	3·0
	3	23 42 45·96	0·85	7 49 36·2	2·9	3·0
	4	23 43 5·68	0·81	7 48 21·6	3·3	3·0
	5	23 43 24·43	0·76	7 46 57·6	3·7	3·0
	6	23 43 42·19	0·72	7 45 24·1	4·1	3·0
	7	23 43 58·96	0·68	7 43 40·8	4·5	3·1
	8	23 44 14·71	0·64	7 41 47·6	4·9	3·1
	9	23 44 29·44	0·59	7 39 44·3	5·4	3·1
	10	23 44 43·14	0·55	7 37 30·7	5·8	3·1
	11	23 44 55·79	0·51	7 35 6·8	6·2	3·1
	12	23 45 7·40	0·46	7 32 32·2	6·7	3·2
	13	23 45 17·94	0·42	7 29 46·9	7·1	3·2
	14	23 45 27·40	0·37	7 26 50·7	7·6	3·2
	15	23 45 35·79	+ 0·33	N. 7 23 43·5	− 8·0	3·2

EPHEMERIS OF PALLAS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.
1855.		h m s	s	° ′ ″	″
July	15	23 45 35·79	+ 0·33	N. 7 23 43·5	— 8·0
	16	23 45 43·09	0·28	7 20 25·1	8·5
	17	23 45 49·29	0·24	7 16 55·5	9·0
	18	23 45 54·38	0·19	7 13 14·4	9·5
	19	23 45 58·37	0·14	7 9 21·8	9·9
	20	23 46 1·24	0·10	7 5 17·5	10·4
	21	23 46 2·98	+ 0·05	7 1 1·4	10·9
	22	23 46 3·60	0·00	6 56 33·4	11·4
	23	23 46 3·08	— 0·05	6 51 53·5	11·9
	24	23 46 1·43	0·09	6 47 1·3	12·4
	25	23 45 58·64	0·14	6 41 56·9	12·9
	26	23 45 54·71	0·19	6 36 40·2	13·5
	27	23 45 49·62	0·24	6 31 11·0	14·0
	28	23 45 43·38	0·28	6 25 29·2	14·5
	29	23 45 35·98	0·33	6 19 34·8	15·0
	30	23 45 27·43	0·38	6 13 27·5	15·6
	31	23 45 17·71	0·43	6 7 7·4	16·1
August	1	23 45 6·84	0·48	6 0 34·4	16·6
	2	23 44 54·80	0·53	5 53 48·4	17·2
	3	23 44 41·60	0·57	5 46 49·3	17·7
	4	23 44 27·23	0·62	5 39 37·0	18·3
	5	23 44 11·70	0·67	5 32 11·5	18·8
	6	23 43 55·01	0·72	5 24 32·8	19·4
	7	23 43 37·16	0·77	5 16 40·8	19·9
	8	23 43 18·17	0·82	5 8 35·6	20·5
	9	23 42 58·03	0·86	5 0 17·2	21·0
	10	23 42 36·76	0·91	4 51 45·4	21·6
	11	23 42 14·38	0·96	4 43 0·4	22·1
	12	23 41 50·88	1·00	4 34 2·3	22·7
	13	23 41 26·28	1·05	4 24 51·2	23·2
	14	23 41 0·61	— 1·09	N. 4 15 27·1	— 23·8

EPHEMERIS OF PALLAS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
gust	14	23 41 0·61	— 1·09	N. 4 15 27·1	— 23·8	3·7
	15	23 40 33·87	1·14	4 5 50·1	24·3	3·8
	16	23 40 6·09	1·18	3 56 0·4	24·8	3·8
	17	23 39 37·28	1·22	3 45 58·0	25 4	3·8
	18	23 39 7·46	1·26	3 35 43·3	25·9	3·8
	19	23 38 36·66	1·30	3 25 16·3	26·4	3·8
	20	23 38 4·90	1·34	3 14 37·3	26·9	3·8
	21	23 37 32·20	1·38	3 3 46·4	27·4	3·9
	22	23 36 58·59	1·42	2 52 43·8	27·8	3·9
	23	23 36 24·09	1·46	2 41 29·9	28·3	3·9
	24	23 35 48·72	1·49	2 30 4·9	28·8	3·9
	25	23 35 12·52	1·53	2 18 29·1	29·2	3·9
	26	23 34 35·51	1·56	2 6 42·7	29·7	3·9
	27	23 33 57·72	1·59	1 54 46·0	30·1	3·9
	28	23 33 19·18	1·62	1 42 39·3	30·5	4·0
	29	23 32 39·92	1·65	1 30 23·1	30·9	4·0
	30	23 31 59·98	1·67	1 17 57·5	31·3	4·0
	31	23 31 19·37	1·70	1 5 23·0	31·6	4·0
tember	1	23 30 38·14	1·73	0 52 39·9	32·0	4·0
	2	23 29 56·33	1·75	0 39 48·7	32·3	4·0
	3	23 29 13·98	1·78	0 26 49·7	32·6	4·0
	4	23 28 31·13	1·80	0 13 43·4	32·9	4·0
	5	23 27 47·82	1·81	N. 0 0 30·2	33·2	4·0
	6	23 27 4·08	1·83	S. 0 12 49·4	33·4	4·0
	7	23 26 19·96	1·85	0 26 14·9	33·7	4·0
	8	23 25 35·51	1·86	0 39 45·8	33·9	4·1
	9	23 24 50·76	1·87	0 53 21·7	34·1	4·1
	10	23 24 5·78	1·88	1 7 1·8	34·3	4·1
	11	23 23 20·60	1·89	1 20 45·8	34·4	4·1
	12	23 22 35·27	1·89	1 34 33·1	34·5	4·1
	13	23 21 49·84	— 1·89	S. 1 48 23·0	— 34·6	4·1

EPHEMERIS OF PALLAS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
September	13	23 21 49·84	− 1·89	S. 1 48 23·0	− 34·6	4·1
	14	23 21 4·36	1·89	2 2 15·1	34·7	4·1
	15	23 20 18·88	1·89	2 16 8·9	34·8	4·1
	16	23 19 33·44	1·89	2 30 3·6	34·8	4·1
	17	23 18 48·09	1·89	2 43 58·8	34·8	4·1
	18	23 18 2·89	1·88	2 57 53·9	34·8	4·1
	19	23 17 17·88	1·87	3 11 48·3	34·7	4·1
	20	23 16 33·12	1·86	3 25 41·5	34·7	4·1
	21	23 15 48·63	1·85	3 39 32·9	34·6	4·1
	22	23 15 4·47	1·83	3 53 22·0	34·5	4·1
	23	23 14 20·68	1·82	4 7 8·3	34·4	4·1
	24	23 13 37·30	1·80	4 20 51·2	34·2	4·1
	25	23 12 54·38	1·78	4 34 30·2	34·0	4·1
	26	23 12 11·96	1·76	4 48 4·8	33·8	4·1
	27	23 11 30·08	1·73	5 1 34·6	33·6	4·1
	28	23 10 48·78	1·71	5 14 59·0	33·4	4·1
	29	23 10 8·11	1·68	5 28 17·6	33·1	4·1
	30	23 9 28·10	1·65	5 41 30·0	32·9	4·0
October	1	23 8 48·79	1·62	5 54 35·7	32·6	4·0
	2	23 8 10·22	1·59	6 7 34·3	32·3	4·0
	3	23 7 32·43	1·56	6 20 25·3	32·0	4·0
	4	23 6 55·46	1·52	6 33 8·3	31·6	4·0
	5	23 6 19·35	1·49	6 45 42·9	31·3	4·0
	6	23 5 44·12	1·45	6 58 8·7	30·9	4·0
	7	23 5 9·82	1·41	7 10 25·3	30·5	4·0
	8	23 4 36·48	1·37	7 22 32·3	30·1	4·0
	9	23 4 4·14	1·33	7 34 29·5	29·7	4·0
	10	23 3 32·81	1·28	7 46 16·5	29·2	4·0
	11	23 3 2·54	1·24	7 57 52·8	28·8	3·9
	12	23 2 33·35	1·19	8 9 18·4	28·3	3·9
	13	23 2 5·28	− 1·15	S. 8 20 32·8	− 27·9	3·9

EPHEMERIS OF PALLAS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
October	13	23 2 5·28	— 1·15	S. 8 20 32·8	— 27·9	3·9
	14	23 1 38·35	1·10	8 31 35·8	27·4	3·9
	15	23 1 12·57	1·05	8 42 27·3	26·9	3·9
	16	23 0 47·96	1·00	8 53 7·1	26·4	3·9
	17	23 0 24·56	0·95	9 3 34·8	25·9	3·9
	18	23 0 2·37	0·90	9 13 50·4	25·4	3·8
	19	22 59 41·42	0·85	9 23 53·7	24·9	3·8
	20	22 59 21·72	0·80	9 33 44·6	24·4	3·8
	21	22 59 3·27	0·74	9 43 23·0	23·8	3·8
	22	22 58 46·09	0·69	9 52 48·7	23·3	3·8
	23	22 58 30·20	0·64	10 2 1·7	22·8	3·8
	24	22 58 15·58	0·58	10 11 2·0	22·3	3·8
	25	22 58 2·27	0·53	10 19 49·5	21·7	3·7
	26	22 57 50·26	0·47	10 28 24·1	21·2	3·7
	27	22 57 39·56	0·42	10 36 45·8	20·6	3·7
	28	22 57 30·17	0·36	10 44 54·5	20·1	3·7
	29	22 57 22·11	0·31	10 52 50·3	19·6	3·7
	30	22 57 15·37	0·25	11 0 33·2	19·0	3·7
	31	22 57 9·95	0·20	11 8 3·1	18·5	3·6
November	1	22 57 5·87	0·14	11 15 20·0	17·9	3·6
	2	22 57 3·12	0·09	11 22 24·0	17·4	3·6
	3	22 57 1·70	— 0·03	11 29 15·1	16·9	3·6
	4	22 57 1·62	+ 0·02	11 35 53·3	16·3	3·6
	5	22 57 2·88	0·08	11 42 18·6	15·8	3·6
	6	22 57 5·47	0·14	11 48 31·2		
	7	22 57 9·39	0·19	11 54 31·0		
	8	22 57 14·64	0·25	12 0 18·1		
	9	22 57 21·21	0·30	12 5 52·6		
	10	22 57 29·11	0·36	12 11 14·7		
	11	22 57 38·32	0·41	12 16 24·3		
	12	22 57 48·84	+ 0·47	S. 12 21 21·5		

EPHEMERIS OF PALLAS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.	h m s	s	° ′ ″	″	″
November 12	22 57 48·84	+ 0·47	S. 12 21 21·5	— 12·1	3·5
13	22 58 0·67	0·52	12 26 6·4	11·6	3·4
14	22 58 13·78	0·57	12 30 39·2	11·1	3·4
15	22 58 28·18	0·63	12 35 0·1	10·6	3·4
16	22 58 43·85	0·68	12 39 9·1	10·1	3·4
17	22 59 0·78	0·73	12 43 6·2	9·6	3·4
18	22 59 18·96	0·78	12 46 51·8	9·2	3·4
19	22 59 38·38	0·83	12 50 25·9	8·7	3·3
20	22 59 59·02	0·89	12 53 48·7	8·2	3·3
21	23 0 20·88	0·94	12 57 0·2	7·7	3·3
22	23 0 43·94	0·99	13 0 0·6	7·3	3·3
23	23 1 8·18	1·03	13 2 50·1	6·8	3·3
24	23 1 33·60	1·08	13 5 28·9	6·4	3·3
25	23 2 0·17	1·13	13 7 57·0	6·0	3·2
26	23 2 27·90	1·18	13 10 14·5	5·5	3·2
27	23 2 56·77	1·23	13 12 21·6	5·1	3·2
28	23 3 26·76	1·27	13 14 18·4	4·7	3·2
29	23 3 57·87	1·32	13 16 5·1	4·2	3·2
30	23 4 30·09	1·37	13 17 41·7	3·8	3·2
December 1	23 5 3·39	1·41	13 19 8·4	3·4	3·2
2	23 5 37·78	1·46	13 20 25·4	3·0	3·
3	23 6 13·24	1·50	13 21 32·7	2·6	3·
4	23 6 49·75	1·54	13 22 30·4	2·2	3·
5	23 7 27·31	1·59	13 23 18·8	1·8	3·
6	23 8 5·90	1·63	13 23 57·9	1·4	3·
7	23 8 45·52	1·67	13 24 27·8	1·1	3·
8	23 9 26·14	1·71	13 24 48·7	0·7	3·
9	23 10 7·76	1·75	13 25 0·8	— 0·3	3·
10	23 10 50·37	1·80	13 25 4·2	0·0	3·
11	23 11 33·95	1·84	13 24 58·9	+ 0·4	3·
12	23 12 18·48	+ 1·87	S. 13 24 45·2	+ 0·7	3·

MEAN TIME.

Date.	Geocentric.				Heliocentric.		
	Right Ascension.	Declination.	Log. of Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
54-	h m	° ′		h m	° ′	° ′	
30	21 59·1	S. 21 31	0·5527	3 24·4	338 19	S. 10 22	0·4743
55·							
3	22 4·6	20 58	0·5575	3 14·1	339 4	10 23	0·4742
7	22 10·1	20 24	0·5620	3 3·9	339 49	10 25	0·4742
11	22 15·7	19 50	0·5662	2 53·7	340 34	10 26	0·4741
15	22 21·3	19 15	0·5701	2 43·5	341 19	10 28	0·4740
19	22 27·0	18 40	0·5737	2 33·4	342 4	10 29	0·4739
23	22 32·7	18 4	0·5770	2 23·4	342 49	10 30	0·4738
27	22 38·4	17 28	0·5801	2 13·4	343 34	10 31	0·4737
31	22 44·2	16 51	0·5829	2 3·4	344 19	10 32	0·4736
4	22 50·0	16 14	0·5854	1 53·4	345 4	10 33	0·4734
8	22 55·8	15 37	0·5877	1 43·5	345 49	10 34	0·4733
12	23 1·6	15 0	0·5897	1 33·6	346 34	10 35	0·4732
16	23 7·4	14 22	0·5914	1 23·6	347 20	10 35	0·4730
20	23 13·2	13 44	0·5928	1 13·7	348 5	10 36	0·4728
24	23 19·0	13 6	0·5939	1 3·7	348 50	10 36	0·4727
28	23 24·9	12 28	0·5949	0 53·8	349 35	10 36	0·4725
ch 4	23 30·7	11 50	0·5956	0 43·9	350 21	10 36	0·4724
8	23 36·5	11 12	0·5961	0 34·0	351 6	10 36	0·4722
12	23 42·4	10 34	0·5963	0 24·0	351 51	10 36	0·4721
16	23 48·2	9 57	0·5961	0 14·1	352 37	10 36	0·4719
20	23 54·0	9 19	0·5958	0 4·2	353 22	10 36	0·4717
24	23 59·8	8 42	0·5952	23 51·7	354 8	10 35	0·4715
28	0 5·6	8 4	0·5943	23 41·7	354 53	10 35	0·4713
il 1	0 11·4	7 27	0·5931	23 31·7	355 39	10 34	0·4711
5	0 17·1	6 50	0·5917	23 21·7	356 24	10 33	0·4708
9	0 22·8	6 14	0·5901	23 11·7	357 10	10 33	0·4706
13	0 28·5	5 39	0·5882	23 1·7	357 56	10 32	·04
17	0 34·2	5 3	0·5861	22 51·6	358 42	10	
21	0 39·8	4 28	0·5837	22 41·5	359 27	10	
25	0 45·4	3 54	0·5810	22 31·4	0 13	1(	
29	0 51·0	3 20	0·5781	22 21·2	0 59	1(	
3	0 56·6	S. 2 47	0·5750	22 11·0	1 45	S	

MEAN TIME.

Date.	Geocentric. Right Ascension. Noon.	Declination. Noon.	Log. of Dist. from the Earth. Noon.	Meridian Passage.	Heliocentri Longitude. Noon.	Latitude. Noon.
1855.	h m	° ′		h m	° ′	° ′
May 3	0 56·6	S. 2 47	0·5750	22 11·0	1 45	S. 10 25
7	1 2·1	2 14	0·5716	22 0·7	2 31	10 23
11	1 7·6	1 43	0·5679	21 50·4	3 17	10 22
15	1 13·1	1 12	0·5640	21 40·1	4 3	10 20
19	1 18·5	0 42	0·5599	21 29·7	4 49	10 18
23	1 23·8	S. 0 12	0·5555	21 19·3	5 35	10 16
27	1 29·1	N. 0 16	0·5508	21 8·9	6 22	10 14
31	1 34·3	0 44	0·5459	20 58·4	7 8	10 11
June 4	1 39·5	1 10	0·5407	20 47·8	7 54	10 9
8	1 44·6	1 36	0·5353	20 37·1	8 41	10 7
12	1 49·6	2 0	0·5296	20 26·3	9 27	10 4
16	1 54·6	2 23	0·5236	20 15·5	10 13	10 1
20	1 59·5	2 46	0·5174	20 4·6	11 0	9 58
24	2 4·2	3 7	0·5110	19 53·6	11 47	9 55
28	2 8·8	3 27	0·5042	19 42·5	12 33	9 52
July 2	2 13·4	3 46	0·4973	19 31·2	13 20	9 49
6	2 17·9	4 4	0·4901	19 19·8	14 6	9 46
10	2 22·2	4 20	0·4827	19 8·3	14 53	9 42
14	2 26·3	4 34	0·4750	18 56·7	15 40	9 39
18	2 30·2	4 48	0·4671	18 44·9	16 27	9 35
22	2 34·0	5 0	0·4589	18 32·9	17 14	9 31
26	2 37·7	5 11	0·4505	18 20·8	18 1	9 27
30	2 41·1	5 20	0·4419	18 8·4	18 47	9 23
Aug. 3	2 44·3	5 28	0·4331	17 55·9	19 35	9 19
7	2 47·3	5 34	0·4242	17 43·1	20 23	9 15
11	2 50·0	5 39	0·4150	17 30·1	21 10	9 11
15	2 52·5	5 42	0·4057	17 16·8	21 57	9 6
19	2 54·8	5 44	0·3963	17 3·2	22 45	9 2
23	2 56·7	5 44	0·3868	16 49·4	23 32	8 57
27	2 58·3	5 43	0·3772	16 35·2	24 19	8 52
31	2 59·5	5 41	0·3676	16 20·6	25 7	8 48
Sept. 4	3 0·4	N. 5 37	0·3581	16 5·7	25 54	S. 8 43

MEAN TIME.

Date.	Geocentric. Right Ascension. Noon.	Geocentric. Declination. Noon.	Geocentric. Log. of Dist. from the Earth. Noon.	Geocentric. Meridian Passage.	Heliocentric. Longitude. Noon.	Heliocentric. Latitude. Noon.	Heliocentric. Log. of Rad. Vect. Noon.
1855.	h m	° ′		h m	° ′	° ′	
Sept. 4	3 0·4	N. 5 37	0·3581	16 5·7	25 54	S. 8 43	0·4588
8	3 1·0	5 31	0·3487	15 50·5	26 42	8 38	0·4584
12	3 1·2	5 25	0·3394	15 34·9	27 30	8 32	0·4579
16	3 1·0	5 17	0·3303	15 18·9	28 18	8 27	0·4575
20	3 0·4	5 8	0·3216	15 2·5	29 6	8 22	0·4571
24	2 59·4	4 58	0·3132	14 45·7	29 54	8 16	0·4567
28	2 58·0	4 48	0·3053	14 28·6	30 42	8 11	0·4562
Oct. 2	2 56·2	4 36	0·2980	14 11·0	31 30	8 5	0·4558
6	2 54·1	4 25	0·2912	13 53·1	32 18	7 59	0·4554
10	2 51·6	4 13	0·2852	13 34·9	33 7	7 53	0·4549
14	2 48·8	4 1	0·2800	13 16·3	33 55	7 47	0·4545
18	2 45·7	3 49	0·2756	12 57·5	34 44	7 41	0·4540
22	2 42·3	3 38	0·2722	12 38·4	35 32	7 35	0·4536
26	2 38·8	3 28	0·2698	12 19·2	36 21	7 28	0·4531
30	2 35·2	3 19	0·2685	11 59·8	37 9	7 22	0·4527
Nov. 3	2 31·5	3 12	0·2684	11 40·5	37 58	7 15	0·4522
7	2 27·9	3 6	0·2693	11 21·1	38 47	7 9	0·4517
11	2 24·3	3 2	0·2711	11 1·8	39 36	7 2	0·4512
15	2 20·9	3 0	0·2741	10 42·6	40 25	6 55	0·4508
19	2 17·6	3 2	0·2780	10 23·7	41 14	6 48	0·4503
23	2 14·5	3 4	0·2827	10 5·0	42 3	6 41	0·4498
27	2 11·7	3 9	0·2884	9 46·6	42 53	6 34	0·4493
Dec. 1	2 9·4	3 17	0·2948	9 28·5	43 42	6 26	0·4489
5	2 7·3	3 27	0·3018	9 10·8	44 31	6 19	0·4484
9	2 5·7	3 39	0·3094	8 53·4	45 21	6 12	0·4479
13	2 4·4	3 54	0·3174	8 36·4	46 11	6 4	0·4474
17	2 3·5	4 10	0·3259	8 19·9	47 0	5 57	0·4469
21	2 3·0	4 29	0·3346	8 3·7	47 50	5 49	0
25	2 2·9	4 50	0·3435	7 47·9	48 40	5 41	
29	2 3·2	5 12	0·3527	7 32·5	49 30	5 34	
1856. Jan. 2	2 3·9	N. 5 36	0·3621	7 17·5	50 20	S. 5 26	

EPHEMERIS OF CERES FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor Par
1855.		h m s	s	° ′ ″	″	″
August	2	2 44 6·15	+ 1·96	N. 5 27 5·9	+ 4·6	3·2
	3	2 44 52·54	1·92	5 28 50·7	4·3	3·2
	4	2 45 38·07	1·88	5 30 30·1	4·0	3·2
	5	2 46 22·73	1·84	5 32 3·8	3·8	3·2
	6	2 47 6·50	1·80	5 33 32·1	3·6	3·2
	7	2 47 49·35	1·77	5 34 54·7	3·3	3·2
	8	2 48 31·28	1·73	5 36 11·7	3·1	3·2
	9	2 49 12·26	1·69	5 37 23·2	2·9	3·3
	10	2 49 52·28	1·65	5 38 29·1	2·7	3·3
	11	2 50 31·32	1·61	5 39 29·3	2·4	3·3
	12	2 51 9·37	1·56	5 40 24·0	2·2	3·3
	13	2 51 46·40	1·52	5 41 13·1	1·9	3·3
	14	2 52 22·40	1·48	5 41 56·5	1·7	3·4
	15	2 52 57·36	1·43	5 42 34·3	1·5	3·4
	16	2 53 31·26	1·39	5 43 6·6	1·2	3·4
	17	2 54 4·09	1·35	5 43 33·3	1·0	3·4
	18	2 54 35·83	1·30	5 43 54·4	0·8	3·4
	19	2 55 6·47	1·25	5 44 10·0	0·6	3·4
	20	2 55 35·99	1·21	5 44 20·1	0·3	3·5
	21	2 56 4·38	1·16	5 44 24·7	+ 0·1	3·5
	22	2 56 31·62	1·11	5 44 23·9	− 0·1	3·5
	23	2 56 57·70	1·06	5 44 17·6	0·4	3·5
	24	2 57 22·60	1·01	5 44 5·9	0·6	3·5
	25	2 57 46·31	0·96	5 43 48·8	0·8	3·6
	26	2 58 8·80	0·91	5 43 26·4	1·0	3·6
	27	2 58 30·07	0·86	5 42 58·6	1·3	3·6
	28	2 58 50·10	0·81	5 42 25·4	1·5	3·6
	29	2 59 8·87	0·76	5 41 47·0	1·7	3·6
	30	2 59 26·37	0·70	5 41 3·2	1·9	3·7
	31	2 59 42·58	0·65	5 40 14·2	2·2	3·7
September	1	2 59 57·48	+ 0·59	N. 5 39 19·8	− 2·4	3·7

EPHEMERIS OF CERES FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
September	1	2 59 57·48	+ 0·59	N. 5 39 19·8	— 2·4	3·7
	2	3 0 11·07	0·54	5 38 20·3	2·6	3·7
	3	3 0 23·31	0·48	5 37 15·6	2·8	3·7
	4	3 0 34·20	0·43	5 36 5·7	3·0	3·8
	5	3 0 43·72	0·37	5 34 50·8	3·2	3·8
	6	3 0 51·85	0·31	5 33 30·8	3·4	3·8
	7	3 0 58·59	0·25	5 32 5·8	3·6	3·8
	8	3 1 3·91	0·19	5 30 35·9	3·8	3·8
	9	3 1 7·82	0·13	5 29 1·2	4·0	3·9
	10	3 1 10·29	0·07	5 27 21·8	4·2	3·9
	11	3 1 11·32	+ 0·01	5 25 37·7	4·4	3·9
	12	3 1 10·90	— 0·05	5 23 49·0	4·6	3·9
	13	3 1 9·03	0·11	5 21 55·9	4·8	3·9
	14	3 1 5·70	0·17	5 19 58·4	5·0	4·0
	15	3 1 0·90	0·23	5 17 56·7	5·2	4·0
	16	3 0 54·63	0·29	5 15 50·9	5·3	4·0
	17	3 0 46·89	0·35	5 13 41·1	5·5	4·0
	18	3 0 37·68	0·41	5 11 27·4	5·6	4·1
	19	3 0 26·99	0·48	5 9 10·0	5·8	4·1
	20	3 0 14·83	0·54	5 6 49·0	5·9	4·1
	21	3 0 1·20	0·60	5 4 24·5	6·1	4·1
	22	2 59 46·09	0·66	5 1 56·6	6·2	4·1
	23	2 59 29·52	0·72	4 59 25·6	6·4	4·2
	24	2 59 11·48	0·78	4 56 51·5	6·5	4·2
	25	2 58 51·99	0·84	4 54 14·4	6·6	4·2
	26	2 58 31·04	0·90	4 51 34·6	6·7	4·2
	27	2 58 8·64	0·96	4 48 52·1	6·8	[illegible]
	28	2 57 44·79	1·02	4 46 7·1	6·9	
	29	2 57 19·52	1·08	4 43 19·9	7·1	
	30	2 56 52·82	1·14	4 40 30·5	[illegible]	
October	1	2 56 24·72	— 1·20	N. 4 37 39·1	—	

EPHEMERIS OF CERES FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.		Apparent Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s		° ′ ″	″	″
October	1	— 2 56 24·72	— 1·20	N.	4 37 39·1	— 7·2	4·3
	2	2 55 55·22	1·26		4 34 46·0	7·3	4·3
	3	2 55 24·34	1·32		4 31 51·3	7·3	4·4
	4	2 54 52·10	1·37		4 28 55·3	7·4	4·4
	5	2 54 18·52	1·43		4 25 58·1	7·4	4·4
	6	2 53 43·62	1·48		4 23 0·0	7·4	4·4
	7	2 53 7·43	1·53		4 20 1·2	7·5	4·4
	8	2 52 29·97	1·59		4 17 2·0	7·5	4·4
	9	2 51 51·28	1·64		4 14 2·6	7·5	4·4
	10	2 51 11·39	1·69		4 11 3·3	7·5	4·4
	11	2 50 30·33	1·73	+	4 8 4·3	7·5	4·5
	12	2 49 48·13	1·78	—	4 5 6·0	7·4	4·5
	13	2 49 4·85	1·83		4 2 8·5	7·4	4·5
	14	2 48 20·51	1·87		3 59 12·1	7·3	4·5
	15	2 47 35·16	1·91		3 56 17·2	7·3	4·5
	16	2 46 48·85	1·95		3 53 23·9	7·2	4·5
	17	2 46 1·62	1·99		3 50 32·6	7·1	4·5
	18	2 45 13·52	2·02		3 47 43·6	7·0	4·5
	19	2 44 24·60	2·06		3 44 57·1	6·9	4·6
	20	2 43 34·89	2·09		3 42 13·4	6·8	4·6
	21	2 42 44·46	2·12		3 39 32·6	6·6	4·6
	22	2 41 53·34	2·14		3 36 55·1	6·5	4·6
	23	2 41 1·60	2·17		3 34 21·1	6·3	4·6
	24	2 40 9·29	2·19		3 31 50·9	6·2	4·6
	25	2 39 16·45	2·21		3 29 24·7	6·0	4·6
	26	2 38 23·14	2·23		3 27 2·7	5·8	4·6
	27	2 37 29·42	2·25		3 24 45·3	5·6	4·6
	28	2 36 35·33	2·26		3 22 32·6	5·4	4·6
	29	2 35 40·95	2·27		3 20 24·8	5·2	4·6
	30	2 34 46·31	2·28		3 18 22·3	5·0	4·6
☌	31	— 2 33 51·47	— 2·29	N.	3 16 25·3	— 4·8	4·6

EPHEMERIS OF CERES FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.		Apparent Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s		° ′ ″	″	″
October	31	+ 2 33 51·47	— 2·29	N.	3 16 25·3	— 4·8	4·6
November	1	2 32 56·51	2·29		3 14 34·0	4·5	4·6
	2	2 32 1·48	2·29		3 12 48·6	4·3	4·6
	3	2 31 6·44	2·29		3 11 9·4	4·0	4·6
	4	2 30 11·44	2·29		3 9 36·7	3·7	4·6
	5	2 29 16·56	2·28		3 8 10·6	3·4	4·6
	6	2 28 21·84	2·28		3 6 51·4	3·2	4·6
	7	2 27 27·36	2·27		3 5 39·2	2·9	4·6
	8	2 26 33·18	2·25		3 4 34·3	2·5	4·6
	9	2 25 39·35	2·23		3 3 36·9	2·2	4·6
	10	2 24 45·95	2·22		3 2 47·2	1·9	4·6
	11	2 23 53·01	2·19		3 2 5·1	1·6	4·6
	12	2 23 0·62	2·17		3 1 31·1	1·3	4·6
	13	2 22 8·81	2·15		3 1 5·2	0·9	4·6
	14	2 21 17·64	2·12		3 0 47·5	0·6	4·6
	15	2 20 27·17	2·09		3 0 38·2	— 0·2	4·6
	16	2 19 37·45	2·06		3 0 37·4	+ 0·1	4·6
	17	2 18 48·52	2·02		3 0 45·1	0·5	4·5
	18	2 18 0·44	1·98		3 1 1·4	0·9	4·5
	19	2 17 13·26	1·95		3 1 26·4	1·2	4·5
	20	2 16 27·00	1·91		3 2 0·2	1·6	4·5
	21	2 15 41·72	1·87		3 2 42·7	2·0	4·5
	22	2 14 57·46	1·82		3 3 34·0	2·3	4·5
	23	2 14 14·24	1·78		3 4 34·2	2·7	4·5
	24	2 13 32·12	1·73		3 5 43·2	[illegible]	4·5
	25	2 12 51·12	1·68		3 7 1·0	[illegible]	4·4
	26	2 12 11·27	1·64		3 8 27·7	[illegible]	[illegible]·4
	27	2 11 32·61	1·59		3 10 3·2	[illegible]	[illegible]
	28	2 10 55·18	1·53		3 11 47·6		
	29	2 10 18·99	1·48		3 13 40·8		
	30	+ 2 9 44·07	— 1·43	N.	3 15 42		

EPHEMERIS OF CERES FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor Par.
1855.		h m s	s	° ′ ″	″	″
November	30	2 9 44·07	− 1·43	N. 3 15 42·8	+ 5·3	4·4
December	1	2 9 10·45	1·37	3 17 53·5	5·6	4·4
	2	2 8 38·16	1·32	3 20 13·1	6·0	4·3
	3	2 8 7·22	1·26	3 22 41·4	6·4	4·3
	4	2 7 37·65	1·20	3 25 18·5	6·7	4·3
	5	2 7 9·48	1·14	3 28 4·0	7·1	4·3
	6	2 6 42·72	1·09	3 30 58·2	7·4	4·3
	7	2 6 17·39	1·03	3 34 1·0	7·8	4·2
	8	2 5 53·50	0·97	3 37 12·2	8·1	4·2
	9	2 5 31·07	0·90	3 40 31·9	8·5	4·2
	10	2 5 10·12	0·84	3 43 59·9	8·8	4·2
	11	2 4 50·65	0·78	3 47 36·1	9·2	4·2
	12	2 4 32·67	0·72	3 51 20·5	9·5	4·2
	13	2 4 16·18	0·66	3 55 12·9	9·9	4·1
	14	2 4 1·20	0·59	3 59 13·3	10·2	4·1
	15	2 3 47·72	0·53	4 3 21·4	10·5	4·1
	16	2 3 35·75	0·47	4 7 37·2	10·8	4·1
	17	2 3 25·29	0·40	4 12 0·6	11·1	4·1
	18	2 3 16·33	0·34	4 16 31·4	11·4	4·0
	19	2 3 8·87	0·28	4 21 9·5	11·7	4·0
	20	2 3 2·90	0·22	4 25 54·7	12·0	4·0
	21	2 2 58·43	0·16	4 30 47·0	12·3	4·0
	22	2 2 55·44	0·09	4 35 46·1	12·6	3·9
	23	2 2 53·93	− 0·03	4 40 52·1	12·9	3·9
	24	2 2 53·88	+ 0·03	4 46 4·7	13·2	3·9
	25	2 2 55·30	0·09	4 51 23·7	13·4	3·9
	26	2 2 58·18	0·15	4 56 49·2	13·7	3·9
	27	2 3 2·51	0·21	5 2 21·0	14·0	3·9
	28	2 3 8·27	0·27	5 7 58·9	14·2	3·8
	29	2 3 15·48	0·33	5 13 42·9	14·5	3·8
	30	2 3 24·11	+ 0·39	N. 5 19 32·8	+ 14·7	3·8

EPHEMERIS OF CERES FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1855.		h m s	s	° ′ ″	″	″
cember	30	2 3 24·11	+ 0·39	N. 5 19 32·8	+ 14·7	3·8
	31	2 3 34·15	0·45	5 25 28·5	14·9	3·8
1856.						
nuary	1	2 3 45·61	0·51	5 31 29·9	15·2	3·7
	2	2 3 58·47	0·56	5 37 36·8	15·4	3·7
	3	2 4 12·71	0·62	5 43 49·2	15·6	3·7
	4	2 4 28·33	0·68	5 50 7·0	15·9	3·7
	5	2 4 45·32	0·74	5 56 30·0	16·1	3·7
	6	2 5 3·66	0·79	6 2 58·1	16·3	3·7
	7	2 5 23·35	0·85	6 9 31·2	16·5	3·6
	8	2 5 44·37	0·90	6 16 9·2	16·7	3·6
	9	2 6 6·70	0·96	6 22 51·9	16·9	3·6
	10	2 6 30·35	1·01	6 29 39·2	17·1	3·6
	11	2 6 55·28	1·07	6 36 31·1	17·3	3·6
	12	2 7 21·49	1·12	6 43 27·2	17·4	3·5
	13	2 7 48·97	1·17	6 50 27·6	17·6	3·5
	14	2 8 17·68	1·22	6 57 32·1	17·8	3·5
	15	2 8 47·63	1·27	7 4 40·5	17·9	3·5
	16	2 9 18·79	1·32	7 11 52·8	18·1	3·5
	17	2 9 51·14	1·37	7 19 8·8	18·2	3·4
	18	2 10 24·68	1·42	7 26 28·4	18·4	3·4
	19	2 10 59·38	1·47	7 33 51·4	18·5	3·4
	20	2 11 35·23	1·51	7 41 17·8	18·7	3·4
	21	2 12 12·22	1·56	7 48 47·4	18·8	3·4
	22	2 12 50·33	1·61	7 56 20·2	18·9	3·4
	23	2 13 29·55	1·66	8 3 55·9	19·0	3·4
	24	2 14 9·86	1·70	8 11 34·5	19·2	3·3
	25	2 14 51·25	1·75	8 19 15·9	19·3	3·3
	26	2 15 33·70	1·79	8 27 0·0	19·4	
	27	2 16 17·21	1·83	8 34 46·7	19·5	
	28	2 17 1·77	1·88	8 42 36·0	19·[illegible]	
	29	2 17 47·35	+ 1·92	N. 8 50 27·7	+	

JANUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vec.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	20 21 38·29	S. 20 1 21·2	0·7767705	1 39·2	307 13 11·9	S. 0 37 19·4	0·70636
2	20 22 35·15	19 58 14·1	·7771819	1 36·2	307 18 24·7	0 37 25·7	·70633
3	20 23 32·13	19 55 5·4	·7775786	1 33·2	307 23 37·6	0 37 32·0	·70631
4	20 24 29·23	19 51 55·2	·7779605	1 30·2	307 28 50·4	0 37 38·3	·70628
5	20 25 26·44	19 48 43·4	·7783276	1 27·2	307 34 3·3	0 37 44·6	·70625
6	20 26 23·76	19 45 30·0	·7786798	1 24·2	307 39 16·3	0 37 50·8	·70622
7	20 27 21·18	19 42 15·2	·7790171	1 21·2	307 44 29·3	0 37 57·1	·70620
8	20 28 18·69	19 38 58·8	·7793394	1 18·3	307 49 42·3	0 38 3·4	·70617
9	20 29 16·29	19 35 40·9	·7796468	1 15·3	307 54 55·4	0 38 9·6	·70614
10	20 30 13·98	19 32 21·5	·7799392	1 12·3	308 0 8·5	0 38 15·9	·70611
11	20 31 11·74	19 29 0·7	·7802166	1 9·3	308 5 21·6	0 38 22·2	·70608
12	20 32 9·58	19 25 38·4	·7804788	1 6·4	308 10 34·8	0 38 28·4	·70606
13	20 33 7·48	19 22 14·7	·7807260	1 3·4	308 15 48·0	0 38 34·7	·70603
14	20 34 5·44	19 18 49·5	·7809580	1 0·4	308 21 1·3	0 38 40·9	·70600
15	20 35 3·46	19 15 23·0	·7811748	0 57·5	308 26 14·6	0 38 47·1	·70597
16	20 36 1·53	19 11 55·1	·7813764	0 54·5	308 31 27·9	0 38 53·4	·70595
17	20 36 59·64	19 8 25·8	·7815627	0 51·5	308 36 41·3	0 38 59·6	·70592
18	20 37 57·78	19 4 55·3	·7817338	0 48·6	308 41 54·7	0 39 5·8	·70589
19	20 38 55·95	19 1 23·4	·7818896	0 45·6	308 47 8·1	0 39 12·0	·70586
20	20 39 54·14	18 57 50·2	·7820301	0 42·6	308 52 21·6	0 39 18·2	·70583
21	20 40 52·35	18 54 15·8	·7821554	0 39·7	308 57 35·2	0 39 24·4	·70581
22	20 41 50·57	18 50 40·2	·7822654	0 36·7	309 2 48·7	0 39 30·7	·70578
23	20 42 48·79	18 47 3·3	·7823601	0 33·7	309 8 2·3	0 39 36·9	·70575
24	20 43 47·00	18 43 25·3	·7824396	0 30·8	309 13 16·0	0 39 43·0	·70572
25	20 44 45·21	18 39 46·1	·7825038	0 27·8	309 18 29·7	0 39 49·2	·70570
26	20 45 43·40	18 36 5·8	·7825529	0 24·8	309 23 43·4	0 39 55·4	·70567
27	20 46 41·57	18 32 24·4	·7825868	0 21·9	309 28 57·2	0 40 1·6	·70564
28	20 47 39·71	18 28 41·9	·7826056	0 18·9	309 34 11·0	0 40 7·8	·70561
29	20 48 37·83	18 24 58·4	·7826092	0 15·9	309 39 24·8	0 40 14·0	·70559
30	20 49 35·91	18 21 13·9	·7825978	0 12·9	309 44 38·7	0 40 20·1	·70556
31	20 50 33·94	18 17 28·4	·7825713	0 10·0	309 49 52·6	0 40 26·3	·70553
32	20 51 31·94	S. 18 13 41·9	0·7825297	0 7·0	309 55 6·5	S. 0 40 32·5	0·70550

JANUARY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	20 21 42·20	+ 2·36	1·19	S. 20 1 8·3	+ 7·8	15·5	1·4
2	20 22 38·95	2·37	1·19	19 58 1·5	7·8	15·5	1·4
3	20 23 35·82	2·37	1·18	19 54 53·1	7·9	15·4	1·4
4	20 24 32·81	2·38	1·18	19 51 43·2	8·0	15·4	1·4
5	20 25 29·91	2·38	1·18	19 48 31·7	8·0	15·4	1·4
6	20 26 27·11	2·39	1·18	19 45 18·6	8·1	15·4	1·4
7	20 27 24·42	2·39	1·18	19 42 4·1	8·1	15·4	1·4
8	20 28 21·82	2·39	1·18	19 38 48·1	8·2	15·4	1·4
9	20 29 19·30	2·40	1·18	19 35 30·5	8·3	15·4	1·4
10	20 30 16·87	2·40	1·17	19 32 11·5	8·3	15·3	1·4
11	20 31 14·52	2·40	1·17	19 28 51·0	8·4	15·3	1·4
12	20 32 12·24	2·41	1·17	19 25 29·0	8·4	15·3	1·4
13	20 33 10·03	2·41	1·17	19 22 5·7	8·5	15·3	1·4
14	20 34 7·87	2·41	1·17	19 18 40·9	8·6	15·3	1·4
15	20 35 5·78	2·41	1·17	19 15 14·7	8·6	15·3	1·4
16	20 36 3·73	2·42	1·17	19 11 47·2	8·7	15·3	1·4
17	20 37 1·72	2·42	1·17	19 8 18·3	8·7	15·3	1·4
18	20 37 59·74	2·42	1·17	19 4 48·1	8·8	15·3	1·4
19	20 38 57·79	2·42	1·17	19 1 16·6	8·8	15·3	1·4
20	20 39 55·87	2·42	1·17	18 57 43·9	8·9	15·3	1·4
21	20 40 53·95	2·42	1·17	18 54 9·9	8·9	15·3	1·4
22	20 41 52·05	2·42	1·17	18 50 34·6	9·0	15·3	1·4
23	20 42 50·15	2·42	1·17	18 46 58·2	9·0	15·3	1·4
24	20 43 48·24	2·42	1·17	18 43 20·6	9·1	15·3	1·4
25	20 44 46·33	2·42	1·17	18 39 41·9	9·1	15·3	1·4
26	20 45 44·40	2·42	1·17	18 36 2·0	9·2	15·3	1·4
27	20 46 42·45	2·42	1·17	18 32 21·0	9·2	15·3	1·4
28	20 47 40·48	2·42	1·16	18 28 39·0	9·3	15·2	1·4
29	{20 48 38·47 / 20 49 36·43}	{2·42 / 2·43}	{1·16 / 1·16}	{18 24 55·9 / 18 21 11·9}	{9·3 / 9·4}	{15 / 15}	{1 / 1}
30	20 50 34·35	2·41	1·16	18 17 26·8	9·4	1	
31	20 51 32·22	2·41	1·16	18 13 40·8	9·4	1	
32	20 52 30·04	+ 2·41	1·16	S. 18 9 53·8	+ 9·5		

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vect.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	20 51 31·94	S. 18 13 41·9	0·7825297	0 7·0	309 55 6·5	S. 0 40 32·5	0·7055095
2	20 52 29·88	18 9 54·4	·7824731	0 4·0	310 0 20·5	0 40 38·6	·7054822
3	20 53 27·77	18 6 6·0	·7824015	{0 / 23·1}	310 5 34·6	0 40 44·8	·7054548
4	20 54 25·60	18 2 16·7	·7823148	23 55·1	310 10 48·6	0 40 50·9	·7054275
5	20 55 23·37	17 58 26·6	·7822131	23 52·1	310 16 2·7	0 40 57·0	·7054003
6	20 56 21·07	17 54 35·6	·7820963	23 49·2	310 21 16·8	0 41 3·2	·7053730
7	20 57 18·69	17 50 43·8	·7819645	23 46·2	310 26 31·0	0 41 9·3	·7053457
8	20 58 16·24	17 46 51·2	·7818177	23 43·2	310 31 45·2	0 41 15·4	·7053185
9	20 59 13·71	17 42 57·8	·7816558	23 40·3	310 36 59·5	0 41 21·5	·7052913
10	21 0 11·09	17 39 3·7	·7814789	23 37·3	310 42 13·8	0 41 27·7	·7052642
11	21 1 8·38	17 35 8·9	·7812868	23 34·3	310 47 28·1	0 41 33·8	·7052370
12	21 2 5·57	17 31 13·5	·7810797	23 31·3	310 52 42·5	0 41 39·9	·7052099
13	21 3 2·66	17 27 17·3	·7808575	23 28·3	310 57 56·9	0 41 46·0	·7051828
14	21 3 59·63	17 23 20·6	·7806202	23 25·3	311 3 11·3	0 41 52·1	·7051557
15	21 4 56·49	17 19 23·3	·7803678	23 22·3	311 8 25·8	0 41 58·2	·7051286
16	21 5 53·22	17 15 25·4	·7801004	23 19·3	311 13 40·3	0 42 4·2	·7051016
17	21 6 49·83	17 11 27·0	·7798179	23 16·3	311 18 54·9	0 42 10·3	·7050746
18	21 7 46·31	17 7 28·1	·7795204	23 13·3	311 24 9·5	0 42 16·4	·7050476
19	21 8 42·64	17 3 28·8	·7792080	23 10·3	311 29 24·1	0 42 22·5	·7050206
20	21 9 38·83	16 59 29·1	·7788806	23 7·3	311 34 38·8	0 42 28·5	·7049936
21	21 10 34·87	16 55 29·1	·7785383	23 4·3	311 39 53·5	0 42 34·6	·7049667
22	21 11 30·76	16 51 28·7	·7781812	23 1·3	311 45 8·2	0 42 40·6	·7049398
23	21 12 26·48	16 47 28·0	·7778093	22 58·3	311 50 23·0	0 42 46·7	·7049129
24	21 13 22·04	16 43 27·1	·7774227	22 55·3	311 55 37·8	0 42 52·7	·7048860
25	21 14 17·43	16 39 26·0	·7770214	22 52·3	312 0 52·7	0 42 58·8	·7048591
26	21 15 12·65	16 35 24·7	·7766054	22 49·3	312 6 7·6	0 43 4·8	·7048323
27	21 16 7·69	16 31 23·3	·7761749	22 46·2	312 11 22·5	0 43 10·8	·7048055
28	21 17 2·54	16 27 21·7	·7757298	22 43·2	312 16 37·5	0 43 16·8	·7047786
29	21 17 57·20	S. 16 23 20·1	0·7752702	22 40·2	312 21 52·5	S. 0 43 22·9	0·7047518

FEBRUARY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
20 52 30·04	+ 2·41	1·16	S. 18 9 53·8	+ 9·5	15·2	1·4
20 53 27·81	2·40	1·16	18 6 5·9	9·5	15·3	1·4
20 54 25·52	2·40	1·16	18 2 17·0	9·6	15·3	1·4
20 55 23·17	2·40	1·16	17 58 27·4	9·6	15·3	1·4
20 56 20·75	2·40	1·16	17 54 36·9	9·6	15·3	1·4
20 57 18·26	2·39	1·16	17 50 45·5	9·7	15·3	1·4
20 58 15·69	2·39	1·16	17 46 53·4	9·7	15·3	1·4
20 59 13·04	2·39	1·16	17 43 0·6	9·7	15·3	1·4
21 0 10·30	2·38	1·16	17 39 7·0	9·7	15·3	1·4
21 1 7·48	2·38	1·16	17 35 12·7	9·8	15·3	1·4
21 2 4·55	2·38	1·16	17 31 17·7	9·8	15·3	1·4
21 3 1·52	2·37	1·15	17 27 22·0	9·8	15·3	1·4
21 3 58·38	2·37	1·15	17 23 25·8	9·9	15·3	1·4
21 4 55·12	2·36	1·15	17 19 29·0	9·9	15·3	1·4
21 5 51·74	2·36	1·15	17 15 31·6	9·9	15·3	1·4
21 6 48·24	2·35	1·15	17 11 33·7	9·9	15·3	1·4
21 7 44·60	2·35	1·15	17 7 35·4	9·9	15·4	1·4
21 8 40·82	2·34	1·15	17 3 36·6	10·0	15·4	1·4
21 9 36·89	2·33	1·15	16 59 37·4	10·0	15·4	1·4
21 10 32·82	2·33	1·15	16 55 37·8	10·0	15·4	1·4
21 11 28·60	2·32	1·15	16 51 38·0	10·0	15·4	1·4
21 12 24·21	2·31	1·15	16 47 37·8	10·0	15·4	1·4
21 13 19·66	2·31	1·15	16 43 37·4	10·0	15·4	1·4
21 14 14·95	2·30	1·15	16 39 36·8	10·0	15·4	1·4
21 15 10·06	2·29	1·16	16 35 36·1	10·0	15·5	1·4
21 16 4·99	2·28	1·16	16 31 35·1	10·0	15·5	1·4
21 16 59·73	2·28	1·16	16 27 34·1	10·0	15·5	1·4
21 17 54·29	2·27	1·16	16 23 33·0	10·0	15·5	1·4
21 18 48·66	+ 2·26	1·16	S. 16 19 31·8	+ 1·		1·4

MARCH, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 17 57·20	S. 16 23 20·1	0·7752702	22 40·2	312 21 52·5	S. 0 43 22·9	0·7047
2	21 18 51·68	16 19 18·4	·7747962	22 37·2	312 27 7·6	0 43 28·9	·7047
3	21 19 45·95	16 15 16·7	·7743077	22 34·1	312 32 22·7	0 43 34·9	·7046
4	21 20 40·03	16 11 15·0	·7738049	22 31·1	312 37 37·8	0 43 40·9	·7046
5	21 21 33·90	16 7 13·3	·7732878	22 28·0	312 42 53·0	0 43 46·9	·7046
6	21 22 27·57	16 3 11·8	·7727563	22 25·0	312 48 8·2	0 43 52·9	·7046
7	21 23 21·02	15 59 10·3	·7722106	22 21·9	312 53 23·4	0 43 58·8	·7045
8	21 24 14·25	15 55 9·0	·7716505	22 18·9	312 58 38·7	0 44 4·8	·7045
9	21 25 7·26	15 51 7·9	·7710761	22 15·8	313 3 54·0	0 44 10·8	·7045
10	21 26 0·05	15 47 7·0	·7704875	22 12·8	313 9 9·4	0 44 16·8	·7045
11	21 26 52·60	15 43 6·4	·7698846	22 9·7	313 14 24·8	0 44 22·7	·7044
12	21 27 44·92	15 39 6·1	·7692674	22 6·6	313 19 40·2	0 44 28·7	·7044
13	21 28 36·99	15 35 6·2	·7686361	22 3·6	313 24 55·7	0 44 34·6	·7044
14	21 29 28·81	15 31 6·7	·7679906	22 0·5	313 30 11·2	0 44 40·6	·7044
15	21 30 20·38	15 27 7·6	·7673310	21 57·4	313 35 26·7	0 44 46·5	·7043
16	21 31 11·69	15 23 9·0	·7666573	21 54·3	313 40 42·3	0 44 52·4	·7043
17	21 32 2·73	15 19 10·9	·7659696	21 51·3	313 45 57·9	0 44 58·4	·7043
18	21 32 53·50	15 15 13·4	·7652679	21 48·2	313 51 13·6	0 45 4·3	·7042
19	21 33 44·00	15 11 16·5	·7645524	21 45·1	313 56 29·3	0 45 10·2	·7042
20	21 34 34·21	15 7 20·2	·7638230	21 42·0	314 1 45·1	0 45 16·1	·7042
21	21 35 24·13	15 3 24·6	·7630800	21 38·9	314 7 0·9	0 45 22·0	·7042
22	21 36 13·77	14 59 29·8	·7623233	21 35·7	314 12 16·7	0 45 27·9	·7041
23	21 37 3·10	14 55 35·8	·7615531	21 32·6	314 17 32·5	0 45 33·8	·7041
24	21 37 52·13	14 51 42·6	·7607695	21 29·5	314 22 48·4	0 45 39·7	·7041
25	21 38 40·84	14 47 50·3	·7599724	21 26·4	314 28 4·4	0 45 45·6	·7041
26	21 39 29·25	14 43 58·9	·7591621	21 23·2	314 33 20·3	0 45 51·5	·7040
27	21 40 17·34	14 40 8·5	·7583386	21 20·1	314 38 36·3	0 45 57·3	·7040
28	21 41 5·10	14 36 19·0	·7575020	21 16·9	314 43 52·4	0 46 3·2	·7040
29	21 41 52·54	14 32 30·6	·7566524	21 13·8	314 49 8·5	0 46 9·1	·7040
30	21 42 39·65	14 28 43·3	·7557898	21 10·6	314 54 24·6	0 46 14·9	·7039
31	21 43 26·43	14 24 57·0	·7549143	21 7·5	314 59 40·8	0 46 20·8	·7039
32	21 44 12·87	S. 14 21 12·0	0·7540260	21 4·3	315 4 57·0	S. 0 46 26·6	0·7039

MARCH, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
21 18 48·66	+ 2·26	1·16	S. 16 19 31·8	+10·0	15·5	1·4
21 19 42·84	2·25	1·16	16 15 30·6	10·0	15·6	1·4
21 20 36·81	2·24	1·16	16 11 29·4	10·0	15·6	1·4
21 21 30·58	2·24	1·16	16 7 28·3	10·0	15·6	1·4
21 22 24·15	2·23	1·16	16 3 27·2	10·0	15·6	1·4
21 23 17·50	2·22	1·16	15 59 26·2	10·0	15·6	1·4
21 24 10·63	2·21	1·16	15 55 25·4	10·0	15·6	1·5
21 25 3·55	2·20	1·17	15 51 24·8	10·0	15·7	1·5
21 25 56·24	2·19	1·17	15 47 24·4	10·0	15·7	1·5
21 26 48·70	2·18	1·17	15 43 24·3	10·0	15·7	1·5
21 27 40·92	2·17	1·17	15 39 24·5	10·0	15·7	1·5
21 28 32·90	2·16	1·18	15 35 25·1	10·0	15·8	1·5
21 29 24·63	2·15	1·18	15 31 26·0	10·0	15·8	1·5
21 30 16·11	2·14	1·18	15 27 27·4	9·9	15·8	1·5
21 31 7·33	2·13	1·18	15 23 29·3	9·9	15·8	1·5
21 31 58·29	2·12	1·18	15 19 31·7	9·9	15·9	1·5
21 32 48·97	2·11	1·18	15 15 34·6	9·9	15·9	1·5
21 33 39·39	2·09	1·18	15 11 38·1	9·8	15·9	1·5
21 34 29·52	2·08	1·18	15 7 42·3	9·8	15 9	1·5
21 35 19·36	2·07	1·18	15 3 47·2	9·8	15·9	1·5
21 36 8·92	2·06	1·18	14 59 52·8	9·8	15·9	1·5
21 36 58·17	2·05	1·18	14 55 59·2	9·7	15·9	1·5
21 37 47·12	2·03	1·19	14 52 6·4	9·7	16·0	1·5
21 38 35·77	2·02	1·19	14 48 14·5	9·6	16·0	1·5
21 39 24·10	2·01	1·19	14 44 23·5	9·6	·0	1·5
21 40 12·12	1·99	1·20	14 40 33·5	0	1	1·5
21 40 59·81	1·98	1·20	14 36 44·4			1·5
21 41 47·19	1·97	1·20	14 32 56·4			1·5
21 42 34·23	1·95	1·21	14 29 9·4			1·5
21 43 20·94	1·94	1·21	14 25 23·6			1·5
21 44 7·32	1·93	1·21	14 21 38·9			1·5
21 44 53·35	+ 1·91	1·21	S. 14 17 55·4			1·5

APRIL, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 44 12·87	S. 14 21 12·0	0·7540260	21 4·3	315 4 57·0	S. 0 46 26·6	0·7039
2	21 44 58·96	14 17 28·1	·7531250	21 1·1	315 10 13·2	0 46 32·5	·7039
3	21 45 44·70	14 13 45·5	·7522113	20 57·9	315 15 29·5	0 46 38·3	·7038
4	21 46 30·09	14 10 4·2	·7512851	20 54·8	315 20 45·9	0 46 44·1	·7038
5	21 47 15·12	14 6 24·1	·7503463	20 51·6	315 26 2·2	0 46 49·9	·7038
6	21 47 59·79	14 2 45·5	·7493950	20 48·4	315 31 18·6	0 46 55·8	·7038
7	21 48 44 10	13 59 8·2	·7484313	20 45·2	315 36 35·1	0 47 1·6	·7037
8	21 49 2? 02	13 55 32·4	·7474552	20 42·0	315 41 51·5	0 47 7·4	·7037
9	21 50 1?·57	13 51 58·1	·7464669	20 38·8	315 47 8·0	0 47 13·2	·7037
10	21 50 54·74	13 48 25·3	·7454663	20 35·5	315 52 24·6	0 47 19·0	·7036
11	21 51 37·51	13 44 54·1	·7444535	20 32·3	315 57 41·2	0 47 24·7	·7036
12	21 52 19·89	13 41 24·5	·7434287	20 29·1	316 2 57·8	0 47 30·5	·7036
13	21 53 1·86	13 37 56·6	·7423920	20 25·8	316 8 14·5	0 47 36·3	·7036
14	21 53 43·42	13 34 30·5	·7413436	20 22·6	316 13 31·2	0 47 42·1	·7035
15	21 54 24·57	13 31 6·1	·7402834	20 19·3	316 18 48·0	0 47 47·8	·7035
16	21 55 5·29	13 27 43·6	·7392117	20 16·1	316 24 4·8	0 47 53·6	·7035
17	21 55 45·59	13 24 23·0	·7381286	20 12·8	316 29 21·6	0 47 59·3	·7035
18	21 56 25·45	13 21 4·4	·7370342	20 9·5	316 34 38·5	0 48 5·1	·7034
19	21 57 4·87	13 17 47·8	·7359288	20 6·2	316 39 55·4	0 48 10·8	·7034
20	21 57 43·85	13 14 33·1	·7348124	20 2·9	316 45 12·3	0 48 16·5	·7034
21	21 58 22·37	13 11 20·6	·7336852	19 59·6	316 50 29·3	0 48 22·3	·7034
22	21 59 0·44	13 8 10·2	·7325474	19 56·3	316 55 46·3	0 48 28·0	·7033
23	21 59 38·04	13 5 1·9	·7313991	19 53·0	317 1 3·4	0 48 33·7	·7033
24	22 0 15·18	13 1 55·9	·7302405	19 49·7	317 6 20·5	0 48 39·4	·7033
25	22 0 51·86	12 58 52·1	·7290717	19 46·4	317 11 37·6	0 48 45·1	·7033
26	22 1 28·05	12 55 50·6	·7278928	19 43·0	317 16 54·8	0 48 50·8	·7032
27	22 2 3·77	12 52 51·5	·7267041	19 39·7	317 22 12·0	0 48 56·5	·7032
28	22 2 39·00	12 49 54·8	·7255056	19 36·3	317 27 29·3	0 49 2·2	·7032
29	22 3 13·75	12 47 0·5	·7242976	19 33·0	317 32 46·6	0 49 7·9	·7032
30	22 3 47·99	12 44 8·6	·7230801	19 29·6	317 38 3·9	0 49 13·5	·7031
31	22 4 21·74	S. 12 41 19·3	0·7218534	19 26·2	317 43 21·3	S. 0 49 19·2	0·7031

APRIL, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	21 44 53·35	+ 1·91	1·21	S. 14 17 55·4	+ 9·3	16·3	1·5
2	21 45 39·04	1·90	1·21	14 14 13·1	9·2	16·3	1·5
3	21 46 24·37	1·88	1·21	14 10 32·1	9·2	16·4	1·5
4	21 47 9·35	1·87	1·21	14 6 52·4	9·1	16·4	1·5
5	21 47 53·97	1·85	1·21	14 3 14·0	9·1	16·4	1·5
6	21 48 38·22	1·84	1·21	13 59 37·1	9·0	16·5	1·5
7	21 49 22·10	1·82	1·21	13 56 1·5	9·0	16·5	1·5
8	21 50 5·60	1·80	1·22	13 52 27·5	8·9	16·6	1·5
9	21 50 48·73	1·79	1·22	13 48 54·9	8·8	16·6	1·5
10	21 51 31·46	1·77	1·23	13 45 24·0	8·8	16·7	1·5
11	21 52 13·80	1·76	1·23	13 41 54·6	8·7	16·7	1·5
12	21 52 55·74	1·74	1·24	13 38 26·9	8·6	16·8	1·6
13	21 53 37·27	1·72	1·24	13 35 1·0	8·5	16·8	1·6
14	21 54 18·39	1·70	1·24	13 31 36·8	8·5	16·9	1·6
15	21 54 59·08	1·69	1·24	13 28 14·5	8·4	16·9	1·6
16	21 55 39·36	1·67	1·24	13 24 54·1	8·3	16·9	1·6
17	21 56 19·19	1·65	1·25	13 21 35·6	8·2	17·0	1·6
18	21 56 58·60	1·63	1·25	13 18 19·1	8·1	17·0	1·6
19	21 57 37·55	1·61	1·25	13 15 4·6	8·1	17·1	1·6
20	21 58 16·06	1·60	1·25	13 11 52·2	8·0	17·1	1·6
21	21 58 54·12	1·58	1·26	13 8 41·8	7·9	17·2	1·6
22	21 59 31·71	1·56	1·26	13 5 33·6	7·8	17·2	1·6
23	22 0 8·85	1·54	1·26	13 2 27·6	7·7	17·2	1·6
24	22 0 45·51	1·52	1·27	12 59 23·9	7·6	17·2	1·6
25	22 1 21·71	1·50	1·27	12 56 22·4	7·5	17·2	1·6
26	22 1 57·43	1·48	1·27	12 53 23·3	7·4		1·6
27	22 2 32·67	1·46	1·28	12 50 26·5	7·3		1·6
28	22 3 7·42	1·44	1·28	12 47 32·2	7·2		
29	22 3 41·68	1·42	1·29	12 44 40·3	7·		
30	22 4 15·44	1·40	1·29	12 41 50·9	7·		
31	22 4 48·70	+ 1·38	1·30	S. 12 39 4·1	+ 6		

MAY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	22 4 21·74	S. 12 41 19·3	0·7218534	19 26·2	317 43 21·3	S. 0 49 19·2	0·703
2	22 4 54·98	12 38 32·6	·7206176	19 22·8	317 48 38·7	0 49 24·8	·703
3	22 5 27·71	12 35 48·4	·7193728	19 19·4	317 53 56·1	0 49 30·5	·703
4	22 5 59·92	12 33 6·9	·7181193	19 16·0	317 59 13·6	0 49 36·1	·703
5	22 6 31·61	12 30 28·1	·7168571	19 12·6	318 4 31·2	0 49 41·8	·703
6	22 7 2·76	12 27 52·0	·7155865	19 9·2	318 9 48·7	0 49 47·4	·703
7	22 7 33·38	12 25 18·7	·7143076	19 5·8	318 15 6·3	0 49 53·0	·703
8	22 8 3·46	12 22 48·2	·7130205	19 2·3	318 20 24·0	0 49 58·6	·702
9	22 8 33·00	12 20 20·6	·7117255	18 58·9	318 25 41·7	0 50 4·3	·702
10	22 9 1·98	12 17 55·9	·7104227	18 55·4	318 30 59·4	0 50 9·9	·702
11	22 9 30·40	12 15 34·2	·7091123	18 51·9	318 36 17·1	0 50 15·5	·702
12	22 9 58·26	12 13 15·6	·7077946	18 48·5	318 41 34·9	0 50 21·0	·702
13	22 10 25·54	12 11 0·0	·7064698	18 45·0	318 46 52·7	0 50 26·6	·702
14	22 10 52·24	12 8 47·5	·7051381	18 41·5	318 52 10·6	0 50 32·2	·702
15	22 11 18·35	12 6 38·2	·7037999	18 38·0	318 57 28·5	0 50 37·8	·702
16	22 11 43·87	12 4 32·1	·7024553	18 34·5	319 2 46·5	0 50 43·3	·702
17	22 12 8·79	12 2 29·4	·7011047	18 30·9	319 8 4·5	0 50 48·9	·702
18	22 12 33·10	12 0 29·9	·6997483	18 27·4	319 13 22·5	0 50 54·4	·702
19	22 12 56·80	11 58 33·8	·6983865	18 23·8	319 18 40·5	0 51 0·0	·702
20	22 13 19·90	11 56 41·0	·6970195	18 20·3	319 23 58·6	0 51 5·5	·702
21	22 13 42·37	11 54 51·7	·6956476	18 16·7	319 29 16·8	0 51 11·1	·702
22	22 14 4·22	11 53 5·9	·6942712	18 13·2	319 34 35·0	0 51 16·6	·702
23	22 14 25·44	11 51 23·5	·6928905	18 9·6	319 39 53·2	0 51 22·1	·702
24	22 14 46·03	11 49 44·7	·6915058	18 6·0	319 45 11·4	0 51 27·6	·702
25	22 15 5·98	11 48 9·5	·6901175	18 2·4	319 50 29·7	0 51 33·1	·702
26	22 15 25·29	11 46 37·8	·6887257	17 58·7	319 55 48·0	0 51 38·6	·702
27	22 15 43·95	11 45 9·8	·6873309	17 55·1	320 1 6·4	0 51 44·1	·702
28	22 16 1·97	11 43 45·4	·6859334	17 51·5	320 6 24·8	0 51 49·6	·702
29	22 16 19·33	11 42 24·8	·6845333	17 47·8	320 11 43·3	0 51 55·1	·702
30	22 16 36·03	11 41 7·9	·6831310	17 44·1	320 17 1·8	0 52 0·5	·702
31	22 16 52·07	11 39 54·7	·6817268	17 40·5	320 22 20·3	0 52 6·0	·702
32	22 17 7·44	S. 11 38 45·3	0·6803211	17 36·8	320 27 38·8	S. 0 52 11·5	0·702

MAY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
22 4 48·70	+ 1·38	1·30	S. 12 39 4·1	+ 6·9	17·6	1·6
22 5 21·45	1·35	1·30	12 36 19·8	6·8	17·6	1·6
22 5 53·69	1·33	1·30	12 33 38·1	6·7	17·7	1·6
22 6 25·40	1·31	1·30	12 30 59·1	6·6	17·7	1·6
22 6 56·59	1·29	1·30	12 28 22·9	6·5	17·8	1·7
22 7 27·24	1·27	1·30	12 25 49·4	6·3	17·8	1·7
22 7 57·36	1·24	1·31	12 23 18·7	6·2	17·9	1·7
22 8 26·94	1·22	1·31	12 20 50·9	6·1	18·0	1·7
22 8 55·97	1·20	1·31	12 18 25·9	6·0	18·0	1·7
22 9 24·44	1·17	1·32	12 16 3·9	5·9	18·1	1·7
22 9 52·35	1·15	1·32	12 13 45·0	5·7	18·1	1·7
22 10 19·68	1·13	1·33	12 11 29·0	5·6	18·2	1·7
22 10 46·45	1·10	1·34	12 9 16·2	5·5	18·3	1·7
22 11 12·63	1·08	1·34	12 7 6·5	5·3	18·3	1·7
22 11 38·21	1·05	1·34	12 5 0·1	5·2	18·4	1·7
22 12 3·21	1·03	1·34	12 2 56·8	5·1	18·4	1·7
22 12 27·60	1·00	1·35	12 0 56·9	4·9	18·5	1·7
22 12 51·38	0·98	1·35	11 59 0·3	4·8	18·5	1·7
22 13 14·56	0·95	1·36	11 57 7·0	4·6	18·5	1·7
22 13 37·13	0·93	1·37	11 55 17·2	4·5	18·6	1·7
22 13 59·07	0·90	1·37	11 53 30·8	4·4	18·6	1·7
22 14 20·39	0·88	1·37	11 51 47·8	4·2	18·7	1·7
22 14 41·08	0·85	1·38	11 50 8·4	4·1	18·8	1·7
22 15 1·13	0·82	1·38	11 48 32·5	3·9	9	1·7
22 15 20·55	0·80	1·38	11 47 0·2			8
22 15 39·33	0·77	1·39	11 45 31·5			
22 15 57·46	0·74	1·40	11 44 6·5			
22 16 14·94	0·71	1·40	11 42 45·1			
22 16 31·77	0·69	1·40	11 41 27·4			
22 16 47·94	0·66	1·41	11 40 13·4			
22 17 3·45	0·63	1·41	11 39 3·3			
22 17 18·29	+ 0·60	1·42	S. 11 37 56·9			

JUNE, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	22 17 7·44	S. 11 38 45·3	0·6803211	17 36·8	320 27 38·8	S. 0 52 11·5	0·702
2	22 17 22·13	11 37 39·8	·6789140	17 33·1	320 32 57·4	0 52 16·9	·702
3	22 17 36·15	11 36 38·1	·6775059	17 29·4	320 38 16·1	0 52 22·3	·702
4	22 17 49·48	11 35 40·3	·6760972	17 25·6	320 43 34·7	0 52 27·8	·702
5	22 18 2·12	11 34 46·4	·6746881	17 21·9	320 48 53·4	0 52 33·2	·702
6	22 18 14·07	11 33 56·5	·6732792	17 18·2	320 54 12·2	0 52 38·6	·702
7	22 18 25·32	11 33 10·5	·6718708	17 14·4	320 59 31·0	0 52 44·1	·702
8	22 18 35·87	11 32 28·6	·6704632	17 10·7	321 4 49·8	0 52 49·5	·702
9	22 18 45·71	11 31 50·7	·6690568	17 6·9	321 10 8·6	0 52 54·9	·702
10	22 18 54·85	11 31 16·8	·6676521	17 3·1	321 15 27·5	0 53 0·3	·702
11	22 19 3·26	11 30 47·1	·6662496	16 59·3	321 20 46·4	0 53 5·6	·702
12	22 19 10·95	11 30 21·4	·6648497	16 55·5	321 26 5·4	0 53 11·0	·702
13	22 19 17·91	11 29 59·9	·6634528	16 51·6	321 31 24·4	0 53 16·4	·702
14	22 19 24·15	11 29 42·6	·6620594	16 47·8	321 36 43·4	0 53 21·8	·702
15	22 19 29·66	11 29 29·5	·6606701	16 44·0	321 42 2·5	0 53 27·1	·702
16	22 19 34·44	11 29 20·5	·6592852	16 40·1	321 47 21·6	0 53 32·5	·702
17	22 19 38·48	11 29 15·7	·6579053	16 36·2	321 52 40·7	0 53 37·8	·702
18	22 19 41·79	11 29 15·2	·6565307	16 32·4	321 57 59·9	0 53 43·2	·701
19	22 19 44·37	11 29 18·8	·6551621	16 28·5	322 3 19·1	0 53 48·5	·701
20	22 19 46·21	11 29 26·6	·6537998	16 24·6	322 8 38·3	0 53 53·8	·701
21	22 19 47·32	11 29 38·6	·6524444	16 20·6	322 13 57·6	0 53 59·1	·701
22	22 19 47·70	11 29 54·8	·6510963	16 16·7	322 19 16·9	0 54 4·4	·701
23	22 19 47·34	11 30 15·2	·6497560	16 12·7	322 24 36·2	0 54 9·7	·701
24	22 19 46·24	11 30 39·7	·6484240	16 8·8	322 29 55·6	0 54 15·0	·701
25	22 19 44·42	11 31 8·4	·6471008	16 4·8	322 35 15·0	0 54 20·3	·701
26	22 19 41·85	11 31 41·2	·6457868	16 0·8	322 40 34·5	0 54 25·6	·701
27	22 19 38·56	11 32 18·1	·6444827	15 56·8	322 45 54·0	0 54 30·9	·701
28	22 19 34·54	11 32 59·2	·6431888	15 52·8	322 51 13·5	0 54 36·1	·701
29	22 19 29·78	11 33 44·3	·6419056	15 48·8	322 56 33·0	0 54 41·4	·701
30	22 19 24·30	11 34 33·5	·6406337	15 44·8	323 1 52·6	0 54 46·6	·701
31	22 19 18·09	S. 11 35 26·8	0·6393734	15 40·7	323 7 12·2	S. 0 54 51·9	0·701

JUNE, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
22 17 18·29	+ 0·60	1·42	S. 11 37 56·9	+ 2·7	19·4	1·8
22 17 32·45	0·58	1·42	11 36 54·3	2·5	19·5	1·8
22 17 45·93	0·55	1·42	11 35 55·6	2·4	19·5	1·8
22 17 58·73	0·52	1·43	11 35 0·8	2·2	19·6	1·8
22 18 10·83	0·49	1·43	11 34 9·9	2·0	19·6	1·8
22 18 22·25	0·46	1·44	11 33 23·0	1·9	19·7	1·8
22 18 32·97	0·43	1·45	11 32 40·0	1·7	19·8	1·8
22 18 42·99	0·40	1·45	11 32 1·1	1·5	19·8	1·8
22 18 52·30	0·37	1·45	11 31 26·1	1·4	19·8	1·8
22 19 0·90	0·34	1·46	11 30 55·3	1·2	19·9	1·8
22 19 8·78	0·31	1·46	11 30 28·5	1·0	20·0	1·9
22 19 15·93	0·28	1·46	11 30 5·9	0·9	20·0	1·9
22 19 22·37	0·25	1·47	11 29 47·3	0·7	20·1	1·9
22 19 28·08	0·22	1·47	11 29 33·0	0·5	20·2	1·9
22 19 33·07	0·19	1·47	11 29 22·8	0·3	20·2	1·9
22 19 37·32	0·16	1·48	11 29 16·7	+ 0·2	20·3	1·9
22 19 40·85	0·13	1·49	11 29 14 9	0·0	20·4	1·9
22 19 43·64	0·10	1·49	11 29 17·2	− 0·2	20·5	1·9
22 19 45·71	0·07	1·50	11 29 23·7	0·4	20·5	1·9
22 19 47·05	0·04	1·50	11 29 34·3	0·5	20·6	1·9
22 19 47·66	+ 0·01	1·51	11 29 49·2	0·7	20·7	1·9
22 19 47·54	− 0·02	1·51	11 30 8·2	0·9	20·7	1·9
22 19 46·68	0·05	1·52	11 30 31·3	1·0	20·8	1·9
22 19 45·10	0·08	1·53	11 30 58·5	1·2	20·9	1·9
22 19 42·78	0·11	1·53	11 31 29·9	1·4	20·9	1·9
22 19 39·74	0·14	1·53	11 32 5·4	1·6	21·0	1·9
22 19 35·97	0·17	1·54	11 32 45·0	1·7		1·9
22 19 31·47	0·20	1·55	11 33 28·6			·0
22 19 26·25	0·23	1·55	11 34 16·2			·0
22 19 20·31	0·26	1·56	11 3			
22 19 13·65	− 0·29	1·56	S. 11			

JULY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	Noo
	h m s	° ′ ″	′ ″	h m	° ′ ″	° ′ ″	
1	22 19 18·09	S. 11 35 26·8	0·6393734	15 40·7	323 7 12·2	S. 0 54 51·9	0·701(
2	22 19 11·16	11 36 24·2	·6381254	15 36·7	323 12 31·9	0 54 57·1	·701(
3	22 19 3·51	11 37 25·6	·6368900	15 32·6	323 17 51·5	0 55 2·3	·701(
4	22 18 55·13	11 38 31·0	·6356678	15 28·5	323 23 11·2	0 55 7·6	·701(
5	22 18 46·03	11 39 40·4	·6344595	15 24·4	323 28 31·0	0 55 12·8	·701
6	22 18 36·22	11 40 53·7	·6332655	15 20·3	323 33 50·8	0 55 18·0	·701
7	22 18 25·70	11 42 10·9	·6320864	15 16·2	323 39 10·6	0 55 23·2	·701
8	22 18 14·47	11 43 32·0	·6309229	15 12·1	323 44 30·4	0 55 28·4	·701
9	22 18 2·53	11 44 56·9	·6297754	15 8·0	323 49 50·3	0 55 33·6	·701
10	22 17 49·90	11 46 25·6	·6286446	15 3·8	323 55 10·2	0 55 38·7	·701
11	22 17 36·57	11 47 58·1	·6275310	14 59·7	324 0 30·2	0 55 43·9	·701
12	22 17 22·55	11 49 34·3	·6264352	14 55·5	324 5 50·2	0 55 49·1	·701
13	22 17 7·86	11 51 14·1	·6253578	14 51·3	324 11 10·2	0 55 54·2	·701
14	22 16 52·50	11 52 57·5	·6242994	14 47·1	324 16 30·2	0 55 59·3	·701
15	22 16 36·48	11 54 44·5	·6232605	14 42·9	324 21 50·3	0 56 4·5	·701
16	22 16 19·80	11 56 34·9	·6222418	14 38·7	324 27 10·4	0 56 9·6	·701
17	22 16 2·49	11 58 28·7	·6212437	14 34·5	324 32 30·6	0 56 14·7	·701
18	22 15 44·54	12 0 25·8	·6202668	14 30·3	324 37 50·7	0 56 19·9	·701
19	22 15 25·98	12 2 26·1	·6193116	14 26·0	324 43 10·9	0 56 25·0	·701
20	22 15 6·81	12 4 29·6	·6183786	14 21·7	324 48 31·2	0 56 30·1	·701
21	22 14 47·04	12 6 36·1	·6174685	14 17·5	324 53 51·5	0 56 35·2	·701
22	22 14 26·69	12 8 45·5	·6165816	14 13·2	324 59 11·8	0 56 40·2	·701
23	22 14 5·77	12 10 57·9	·6157184	14 8·9	325 4 32·1	0 56 45·3	·701
24	22 13 44·29	12 13 13·0	·6148793	14 4·6	325 9 52·5	0 56 50·4	·701
25	22 13 22·26	12 15 30·7	·6140649	14 0·3	325 15 12·9	0 56 55·4	·701
26	22 12 59·71	12 17 51·1	·6132755	13 56·0	325 20 33·4	0 57 0·5	·701
27	22 12 36·64	12 20 13·9	·6125115	13 51·7	325 25 53·9	0 57 5·5	·701
28	22 12 13·07	12 22 39·2	·6117735	13 47·4	325 31 14·4	0 57 10·6	·701
29	22 11 49·01	12 25 6·7	·6110618	13 43·1	325 36 35·0	0 57 15·6	·701
30	22 11 24·48	12 27 36·5	·6103768	13 38·7	325 41 55·5	0 57 20·6	·701
31	22 10 59·48	12 30 8·4	·6097190	13 34·4	325 47 16·1	0 57 25·7	·700
32	22 10 34·04	S. 12 32 42·3	0·6090887	13 30·0	325 52 36·8	S. 0 57 30·7	0·700

JULY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
22 19 13·65	— 0·29	1·56	S. 11 36 3·9	— 2·4	21·2	2·0
22 19 6·26	0·32	1·56	11 37 3·7	2·6	21·3	2·0
22 18 58·16	0·35	1·57	11 38 7·5	2·7	21·4	2·0
22 18 49·34	0·38	1·57	11 39 15·3	2·9	21·4	2·0
22 18 39·81	0·41	1·57	11 40 27·0	3·1	21·5	2·0
22 18 29·58	0·44	1·58	11 41 42·6	3·2	21·6	2·0
22 18 18·64	0·47	1·58	11 43 2·1	3·4	21·6	2·0
22 18 6·99	0·50	1·59	11 44 25·3	3·5	21·7	2·0
22 17 54·65	0·53	1·59	11 45 52·4	3·7	21·7	2·0
22 17 41·61	0·56	1·60	11 47 23·2	3·9	21·8	2·0
22 17 27·89	0·58	1·60	11 48 57·7	4·0	21·8	2·0
22 17 13·50	0·61	1·60	11 50 35·9	4·2	21·9	2·0
22 16 58·43	0·64	1·61	11 52 17·7	4·3	22·0	2·0
22 16 42·71	0·67	1·61	11 54 3·0	4·5	22·0	2·0
22 16 26·33	0·70	1·61	11 55 51·8	4·6	22·1	2·0
22 16 9·32	0·72	1·61	11 57 43·9	4·7	22·1	2·0
22 15 51·67	0·75	1·62	11 59 39·4	4·9	22·2	2·1
22 15 33·40	0·77	1·62	12 1 38·1	5·0	22·2	2·1
22 15 14·53	0·80	1·63	12 3 40·0	5·1	22·3	2·1
22 14 55·05	0·82	1·63	12 5 44·9	5·3	22·3	2·1
22 14 34·99	0·85	1·64	12 7 52·8	5·4	22·3	2·1
22 14 14·36	0·87	1·64	12 10 3·6	5·5	22·3	2·1
22 13 53·17	0·89	1·64	12 12 17·2	5·6	22·4	2·1
22 13 31·44	0·92	1·64	12 14 33·4	5·7	22·4	2·1
22 13 9·17	0·94	1·65	12 16 52·3	5·8	[illegible]	2·1
22 12 46·38	0·96	1·65	12 19 13·7	5·9		2·1
22 12 23·09	0·98	1·66	12 21 37·5	6·0		2·1
22 11 59·31	1·00	1·66	12 24 3·7			·1
22 11 35·04	1·02	1·66	12 26 32·1			·1
22 11 10·32	1·04	1·67	12 29 2·6			1
22 10 45·15	1·06	1·67	12 31 35·2			1
22 10 19·54	— 1·08	1·67	S. 12 34 9·7	—		

AUGUST, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	22 10 34·04	S. 12 32 42·3	0·6090887	13 30·0	325 52 36·8	S. 0 57 30·7	0·70095
2	22 10 8·17	12 35 18·1	·6084863	13 25·6	325 57 57·5	0 57 35·7	·70093
3	22 9 41·88	12 37 55·8	·6079123	13 21·3	326 3 18·2	0 57 40·7	·70091
4	22 9 15·20	12 40 35·1	·6073670	13 16·9	326 8 38·9	0 57 45·6	·70089
5	22 8 48·14	12 43 16·0	·6068509	13 12·5	326 13 59·7	0 57 50·6	·70086
6	22 8 20·72	12 45 58·4	·6063643	13 8·1	326 19 20·5	0 57 55·6	·70084
7	22 7 52·96	12 48 42·2	·6059075	13 3·7	326 24 41·3	0 58 0·6	·70082
8	22 7 24·87	12 51 27·2	·6054810	12 59·3	326 30 2·2	0 58 5·5	·70080
9	22 6 56·48	12 54 13·4	·6050850	12 54·9	326 35 23·1	0 58 10·4	·70077
10	22 6 27·81	12 57 0·5	·6047198	12 50·5	326 40 44·0	0 58 15·4	·70075
11	22 5 58·88	12 59 48·5	·6043857	12 46·1	326 46 5·0	0 58 20·3	·70073
12	22 5 29·72	13 2 37·2	·6040830	12 41·7	326 51 26·0	0 58 25·2	·70071
13	22 5 0·34	13 5 26·5	·6038118	12 37·2	326 56 47·0	0 58 30·1	·70069
14	22 4 30·76	13 8 16·3	·6035725	12 32·8	327 2 8·1	0 58 35·1	·70066
15	22 4 1·02	13 11 6·4	·6033651	12 28·4	327 7 29·2	0 58 40·0	·70064
16	22 3 31·12	13 13 56·7	·6031898	12 24·0	327 12 50·3	0 58 44·8	·70062
17	22 3 1·10	13 16 47·1	·6030467	12 19·5	327 18 11·5	0 58 49·7	·70060
18	22 2 30·98	13 19 37·5	·6029358	12 15·1	327 23 32·7	0 58 54·6	·70058
19	22 2 0·78	13 22 27·6	·6028573	12 10·7	327 28 53·9	0 58 59·5	·70055
20	22 1 30·52	13 25 17·4	·6028111	12 6·2	327 34 15·1	0 59 4·3	·70053
21	22 1 0·23	13 28 6·8	·6027973	12 1·8	327 39 36·4	0 59 9·2	·70051
22	22 0 29·93	13 30 55·6	·6028159	11 57·4	327 44 57·7	0 59 14·0	·70049
23	21 59 59·63	13 33 43·7	·6028667	11 52·9	327 50 19·1	0 59 18·9	·70047
24	21 59 29·37	13 36 31·0	·6029498	11 48·5	327 55 40·5	0 59 23·7	·70044
25	21 58 59·17	13 39 17·4	·6030650	11 44·1	328 1 1·9	0 59 28·5	·70042
26	21 58 29·04	13 42 2·7	·6032122	11 39·6	328 6 23·3	0 59 33·3	·70040
27	21 57 59·01	13 44 46·8	·6033915	11 35·2	328 11 44·8	0 59 38·1	·70038
28	21 57 29·11	13 47 29·7	·6036026	11 30·8	328 17 6·3	0 59 42·9	·70036
29	21 56 59·34	13 50 11·2	·6038454	11 26·3	328 22 27·9	0 59 47·7	·70034
30	21 56 29·73	13 52 51·2	·6041199	11 21·9	328 27 49·4	0 59 52·5	·70031
31	21 56 0·31	13 55 29·6	·6044258	11 17·5	328 33 11·0	0 59 57·2	·70029
32	21 55 31·09	S. 13 58 6·3	0·6047630	11 13·1	328 38 32·6	S. 1 0 2·0	0·70027

AUGUST, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	22 10 19·54	− 1·08	1·67	S. 12 34 9·7	− 6·5	22·8	2·1
2	22 9 53·51	1·09	1·67	12 36 46·1	6·6	22·8	2·1
3	22 9 27·08	1·11	1·67	12 39 24·2	6·6	22·8	2·1
4	22 9 0·27	1·12	1·68	12 42 4·0	6·7	22·9	2·1
5	22 8 33·10	1·14	1·68	12 44 45·2	6·7	22·9	2·1
6	22 8 5·57	1·15	1·68	12 47 27·9	6·8	22·9	2·1
7	22 7 37·71	1·17	1·68	12 50 11·9	6·9	22·9	2·1
8	22 7 9·54	1·18	1·69	12 52 57·0	6·9	23·0	2·1
9	22 6 41·09	1·19	1·69	12 55 43·2	6·9	23·0	2·1
10	22 6 12·37	1·20	1·69	12 58 30·3	7·0	23·0	2·1
11	22 5 43·40	1·21	1·69	13 1 18·1	7·0	23·0	2·1
12	22 5 14·21	1·22	1·69	13 4 6·7	7·0	23·0	2·1
13	22 4 44·81	1·23	1·69	13 6 55·7	7·0	23·0	2·1
14	22 4 15·23	1·24	1·69	13 9 45·2	7·1	23·0	2·1
15	22 3 45·50	1·24	1·70	13 12 34·9	7·1	23·1	2·1
16	22 3 15·63	1·25	1·70	13 15 24·7	7·1	23·1	2·1
17	22 2 45·64	1·25	1·70	13 18 14·6	7·1	23·1	2·1
18	22 2 15·57	1·25	1·70	13 21 4·4	7·1	23·1	2·1
19	22 1 45·44	1·26	1·70	13 23 53·8	7·1	23·1	2·1
20	22 1 15·25	1·26	1·70	13 26 42·9	7·0	23·1	2·1
21	22 0 45·04	1·26	1·70	13 29 31·5	7·0	23·1	2·1
22	22 0 14·83	1·26	1·71	13 32 19·5	7·0	[illegible]	2·1
23	21 59 44·64	1·26	1·71	13 35 6·7	6·9		2·1
24	21 59 14·50	1·26	1·71	13 37 53·0	6·9		2·1
25	21 58 44·43	1·25	1·71	13 40 38·2	6·9		2·1
26	21 58 14·44	1·25	1·71	13 43 22·[illegible]	6·8		2·1
27	21 57 44·56	1·24	1·70	13 46 [illegible]	6·8		2·1
28	21 57 14·81	1·24	1·70	13 48 [illegible]	6·7		2·1
29	21 56 45·20	1·23	1·70	13 51 [illegible]	6·6		2·1
30	21 56 15·78	1·22	1·70	13 54 [illegible]	6·6		2·1
31	21 55 46·54	1·21	1·70	13 56 [illegible]	6·5		2·1
32	21 55 17·51	− 1·20	1·70	S. 13 59 [illegible]	6·4		

SEPTEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 55 31·09	S. 13 58 6·3	0·6047630	11 13·1	328 38 32·6	S. 1 0 2·0	0·7002
2	21 55 2·10	14 0 41·2	·6051313	11 8·7	328 43 54·3	1 0 6·8	·7002
3	21 54 33·36	14 3 14·2	·6055305	11 4·3	328 49 16·0	1 0 11·5	·7002
4	21 54 4·89	14 5 45·2	·6059605	10 59·9	328 54 37·7	1 0 16·2	·7002
5	21 53 36·71	14 8 14·1	·6064209	10 55·5	328 59 59·5	1 0 21·0	·7001
6	21 53 8·84	14 10 40·7	·6069116	10 51·1	329 5 21·3	1 0 25·7	·7001
7	21 52 41·30	14 13 5·0	·6074323	10 46·7	329 10 43·1	1 0 30·4	·7001
8	21 52 14·12	14 15 26·9	·6079827	10 42·3	329 16 4·9	1 0 35·1	·7001
9	21 51 47·31	14 17 46·3	·6085623	10 38·0	329 21 26·8	1 0 39·8	·7001
10	21 51 20·90	14 20 3·1	·6091710	10 33·6	329 26 48·7	1 0 44·5	·7000
11	21 50 54·90	14 22 17·1	·6098081	10 29·3	329 32 10·6	1 0 49·2	·7000
12	21 50 29·35	14 24 28·4	·6104735	10 24·9	329 37 32·6	1 0 53·8	·7000
13	21 50 4·25	14 26 36·8	·6111667	10 20·6	329 42 54·6	1 0 58·5	·7000
14	21 49 39·63	14 28 42·2	·6118871	10 16·2	329 48 16·6	1 1 3·1	·6999
15	21 49 15·51	14 30 44·6	·6126344	10 11·9	329 53 38·7	1 1 7·8	·6999
16	21 48 51·89	14 32 43·8	·6134081	10 7·6	329 59 0·8	1 1 12·4	·6999
17	21 48 28·81	14 34 39·9	·6142076	10 3·2	330 4 22·9	1 1 17·0	·6999
18	21 48 6·27	14 36 32·7	·6150325	9 58·9	330 9 45·1	1 1 21·7	·6999
19	21 47 44·29	14 38 22·2	·6158822	9 54·7	330 15 7·3	1 1 26·3	·6998
20	21 47 22·88	14 40 8·2	·6167562	9 50·4	330 20 29·5	1 1 30·9	·6998
21	21 47 2·07	14 41 50·9	·6176541	9 46·1	330 25 51·7	1 1 35·5	·6998
22	21 46 41·85	14 43 30·0	·6185752	9 41·8	330 31 14·0	1 1 40·1	·6998
23	21 46 22·25	14 45 5·6	·6195191	9 37·6	330 36 36·3	1 1 44·6	·6998
24	21 46 3·28	14 46 37·6	·6204853	9 33·3	330 41 58·7	1 1 49·2	·6997
25	21 45 44·95	14 48 6·0	·6214732	9 29·1	330 47 21·1	1 1 53·8	·6997
26	21 45 27·27	14 49 30·7	·6224822	9 24·9	330 52 43·5	1 1 58 3	·6997
27	21 45 10·25	14 50 51·7	·6235119	9 20·7	330 58 5·9	1 2 2·9	·6997
28	21 44 53·91	14 52 9·0	·6245617	9 16·5	331 3 28·4	1 2 7·4	·6997
29	21 44 38·24	14 53 22·5	·6256312	9 12·3	331 8 50·9	1 2 11·9	·6996
30	21 44 23·26	14 54 32·2	·6267197	9 8·1	331 14 13·4	1 2 16·4	·6996
31	21 44 8·98	S. 14 55 38·1	0·6278267	9 4·0	331 19 36·0	S. 1 2 20·9	0·6996

SEPTEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	21 55 17·51	− 1·20	1·70	S. 13 59 19·0	− 6·4	23·0	2·1
2	21 54 48·72	1·19	1·69	14 1 52·5	6·4	22·9	2·1
3	21 54 20·19	1·18	1·69	14 4 24·2	6·3	22·9	2·1
4	21 53 51·94	1·17	1·69	14 6 53·7	6·2	22·9	2·1
5	21 53 23·98	1·16	1·69	14 9 21·1	6·1	22·9	2·1
6	21 52 56·35	1·14	1·69	14 11 46·3	6·0	22·8	2·1
7	21 52 29·05	1·13	1·69	14 14 9·1	5·9	22·8	2·1
8	21 52 2·11	1·11	1·69	14 16 29·4	5·8	22·8	2·1
9	21 51 35·56	1·10	1·68	14 18 47·2	5·7	22·7	2·1
10	21 51 9·41	1·08	1·68	14 21 2·4	5·6	22·7	2·1
11	21 50 43·68	1·06	1·68	14 23 14·8	5·5	22·7	2·1
12	21 50 18·40	1·04	1·67	14 25 24·5	5·3	22·6	2·1
13	21 49 53·59	1·02	1·67	14 27 31·2	5·2	22·6	2·1
14	21 49 29·25	1·00	1·67	14 29 34·9	5·1	22·6	2·1
15	21 49 5·41	0·98	1·66	14 31 35·6	5·0	22·5	2·1
16	21 48 42·09	0·96	1·66	14 33 33·2	4·8	22·5	2·1
17	21 48 19·30	0·94	1·66	14 35 27·6	4·7	22·4	2·1
18	21 47 57·06	0·91	1·66	14 37 18·7	4·6	22·4	2·1
19	21 47 35·38	0·89	1·65	14 39 6·4	4·4	22·3	2·1
20	21 47 14·28	0·87	1·65	14 40 50·7	4·3	22·3	2·1
21	21 46 53·76	0·84	1·65	14 42 31·7	4·1	22·3	2·1
22	21 46 33·86	0·82	1·65	14 44 9·1	3·9	22·3	2·1
23	21 46 14·56	0·79	1·64	14 45 42·9	3·8	22·2	2·1
24	21 45 55·90	0·76	1·64	14 47 13·2	3·7	22·2	2·1
25	21 45 37·88	0·74	1·64	14 48 39·9	3·5		2·0
26	21 45 20·51	0·71	1·64	14 50 2·9	3·4		2·0
27	21 45 3·81	0·68	1·63	14 51 22·2	3		·0
28	21 44 47·77	0·65	1·63	14 52 37·8			0
29	21 44 32·41	0·63	1·62	14 53 49·7			
30	21 44 17·74	0·60	1·62	14 54 57·7			
31	21 44 3·77	− 0·57	1·61	S. 14 56 2·0			

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*N*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 44 8·98	S. 14 55 38·1	0·6278267	9 4·0	331 19 36·0	S. 1 2 20·9	0·69
2	21 43 55·40	14 56 40·2	·6289517	8 59·8	331 24 58·6	1 2 25·4	·69
3	21 43 42·54	14 57 38·4	·6300941	8 55·7	331 30 21·2	1 2 29·9	·69
4	21 43 30·41	14 58 32·7	·6312536	8 51·5	331 35 43·8	1 2 34·4	·69
5	21 43 19·02	14 59 23·0	·6324294	8 47·4	331 41 6·5	1 2 38·9	·69
6	21 43 8·37	15 0 9·4	·6336211	8 43·3	331 46 29·2	1 2 43·3	·69
7	21 42 58·48	15 0 51·8	·6348283	8 39·2	331 51 52·0	1 2 47·8	·69
8	21 42 49·34	15 1 30·2	·6360502	8 35·1	331 57 14·7	1 2 52·2	·69
9	21 42 40·97	15 2 4·5	·6372862	8 31·1	332 2 37·5	1 2 56·6	·69
10	21 42 33·37	15 2 34·8	·6385357	8 27·0	332 8 0·4	1 3 1·1	·69
11	21 42 26·54	15 3 1·0	·6397982	8 23·0	332 13 23·2	1 3 5·5	·69
12	21 42 20·49	15 3 23·2	·6410731	8 19·0	332 18 46·1	1 3 9·9	·69
13	21 42 15·23	15 3 41·3	·6423596	8 15·0	332 24 9·0	1 3 14·3	·69
14	21 42 10·75	15 3 55·3	·6436573	8 11·0	332 29 32·0	1 3 18·7	·69
15	21 42 7·06	15 4 5·2	·6449655	8 7·0	332 34 55·0	1 3 23·1	·69
16	21 42 4·16	15 4 11·0	·6462838	8 3·0	332 40 18·0	1 3 27·4	·69
17	21 42 2·04	15 4 12·7	6476116	7 59·0	332 45 41·1	1 3 31·8	·69
18	21 42 0·73	15 4 10·4	·6489482	7 55 1	332 51 4·2	1 3 36·2	·69
19	21 42 0·21	15 4 3·9	·6502932	7 51·1	332 56 27·3	1 3 40·5	·69
20	21 42 0·48	15 3 53·4	·6516460	7 47·2	333 1 50·4	1 3 44·8	·69
21	21 42 1·54	15 3 38·8	·6530062	7 43·3	333 7 13·6	1 3 49·2	·69
22	21 42 3·39	15 3 20·1	·6543731	7 39·4	333 12 36·8	1 3 53·5	·69
23	21 42 6·03	15 2 57·4	·6557463	7 35·5	333 18 0·0	1 3 57·8	·69
24	21 42 9·45	15 2 30·7	·6571252	7 31·7	333 23 23·3	1 4 2·1	·69
25	21 42 13·66	15 2 0·0	·6585093	7 27·8	333 28 46·6	1 4 6·4	·69
26	21 42 18·65	15 1 25·3	·6598983	7 24·0	333 34 9·9	1 4 10·7	·69
27	21 42 24·42	15 0 46·6	·6612916	7 20·1	333 39 33·3	1 4 14·9	·69
28	21 42 30·97	15 0 4·0	·6626889	7 16·3	333 44 56·7	1 4 19·2	·69
29	21 42 38·29	14 59 17·4	·6640896	7 12·5	333 50 20·1	1 4 23·5	·69
30	21 42 46·39	14 58 26·9	·6654933	7 8·7	333 55 43·6	1 4 27·7	·69
31	21 42 55·25	14 57 32·5	·6668997	7 4·9	334 1 7·1	1 4 31·9	·69
32	21 43 4·88	S. 14 56 34·1	0·6683084	7 1·1	334 6 30·6	S. 1 4 36·2	0·69

OCTOBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	21 44 3·77	− 0·57	1·61	S. 14 56 2·0	− 2·6	21·8	2·0
2	21 43 50·50	0·54	1·61	14 57 2·5	2·4	21·7	2·0
3	21 43 37·95	0·51	1·61	14 57 59·0	2·3	21·7	2·0
4	21 43 26·12	0·47	1·60	14 58 51·7	2·1	21·6	2·0
5	21 43 15·04	0·45	1·60	14 59 40·5	2·0	21·5	2·0
6	21 43 4·69	0·41	1·60	15 0 25·3	1·8	21·5	2·0
7	21 42 55·09	0·38	1·59	15 1 6·1	1·6	21·4	2·0
8	21 42 46·26	0·35	1·58	15 1 42·9	1·5	21·3	2·0
9	21 42 38·18	0·32	1·58	15 2 15·7	1·3	21·3	2·0
10	21 42 30·87	0·29	1·57	15 2 44·5	1·1	21·2	2·0
11	21 42 24·34	0·26	1·57	15 3 9·2	0·9	21·1	2·0
12	21 42 18·58	0·22	1·57	15 3 29·9	0·8	21·1	2·0
13	21 42 13·60	0·19	1·56	15 3 46·5	0·6	21·0	2·0
14	21 42 9·40	0·16	1·56	15 3 59·1	0·4	21·0	1·9
15	21 42 5·98	0·13	1·56	15 4 7·6	0·3	21·0	1·9
16	21 42 3·36	0·09	1·55	15 4 12·0	− 0·1	20·9	1·9
17	21 42 1·52	0·06	1·54	15 4 12·4	+ 0·1	20·8	1·9
18	21 42 0·47	− 0·03	1·54	15 4 8·7	0·2	20·8	1·9
19	21 42 0·21	+ 0·01	1·53	15 4 0·9	0·4	20·7	1·9
20	21 42 0·73	0·04	1·53	15 3 49·1	0·6	20·6	1·9
21	21 42 2·04	0·07	1·53	15 3 33·2	0·7	20·6	1·9
22	21 42 4·14	0·10	1·52	15 3 13·3	0·9	20·5	1·9
23	21 42 7·02	0·14	1·52	15 2 49·4	1·1	20·4	1·9
24	21 42 10·69	0·17	1·51	15 2 21·5	1·2	20·3	1·9
25	21 42 15·13	0·20	1·51	15 1 49·6		·3	1·9
26	21 42 20·35	0·23	1·51	15 1 13·8		·3	1·9
27	21 42 26·34	0·27	1·50	15 0 34·0			
28	21 42 33·11	0·30	1·49	14 59 50·			
29	21 42 40·64	0·33	1·49	14 59 2			
30	21 42 48·95	0·36	1·48	14 58 1			
31	21 42 58·01	0·40	1·48	14 57 1			
32	21 43 7·84	+ 0·43	1·47	S. 14 56			

NOVEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*No*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 43 4·88	S. 14 56 34·1	0·6683084	7 1·1	334 6 30·6	S. 1 4 36·2	0·69
2	21 43 15·27	14 55 31·9	·6697187	6 57·4	334 11 54·2	1 4 40·4	·69
3	21 43 26·42	14 54 25·7	·6711304	6 53·6	334 17 17·7	1 4 44·6	·69
4	21 43 38·33	14 53 15·7	·6725429	6 49·9	334 22 41·3	1 4 48·8	·69
5	21 43 50·99	14 52 1·9	·6739559	6 46·2	334 28 5·0	1 4 53·0	·69
6	21 44 4·40	14 50 44·2	·6753689	6 42·5	334 33 28·7	1 4 57·2	·69
7	21 44 18·56	14 49 22·7	·6767816	6 38·8	334 38 52·4	1 5 1·3	·69
8	21 44 33·45	14 47 57·4	·6781934	6 35·1	334 44 16·1	1 5 5·5	·69
9	21 44 49·09	14 46 28·3	·6796039	6 31·4	334 49 39·8	1 5 9·6	·69
10	21 45 5·45	14 44 55·4	·6810128	6 27·8	334 55 3·6	1 5 13·8	·69
11	21 45 22·54	14 43 18·8	·6824196	6 24·1	335 0 27·4	1 5 17·9	·69
12	21 45 40·35	14 41 38·4	·6838239	6 20·5	335 5 51·3	1 5 22·0	·69
13	21 45 58·87	14 39 54·3	·6852254	6 16·9	335 11 15·2	1 5 26·2	·69
14	21 46 18·10	14 38 6·5	·6866236	6 13·3	335 16 39·1	1 5 30·3	·69
15	21 46 38·03	14 36 15·1	·6880182	6 9·7	335 22 3·0	1 5 34·4	·69
16	21 46 58·65	14 34 20·0	·6894089	6 6·1	335 27 27·0	1 5 38·4	·69
17	21 47 19·95	14 32 21·3	·6907952	6 2·5	335 32 51·0	1 5 42·5	·69
18	21 47 41·93	14 30 19·0	·6921768	5 59·0	335 38 15·0	1 5 46·6	·69
19	21 48 4·57	14 28 13·2	·6935535	5 55·4	335 43 39·1	1 5 50·7	·69
20	21 48 27·87	14 26 3·9	·6949249	5 51·9	335 49 3·2	1 5 54·7	·69
21	21 48 51·83	14 23 51·1	·6962908	5 48·3	335 54 27·3	1 5 58·7	·69
22	21 49 16·43	14 21 34·9	·6976509	5 44·8	335 59 51·4	1 6 2·8	·69
23	21 49 41·67	14 19 15·2	·6990049	5 41·3	336 5 15·6	1 6 6·8	·69
24	21 50 7·54	14 16 52·2	·7003526	5 37·8	336 10 39·8	1 6 10·8	·69
25	21 50 34·03	14 14 25·8	·7016937	5 34·3	336 16 4·1	1 6 14·8	·69
26	21 51 1·14	14 11 56·0	·7030279	5 30·8	336 21 28·3	1 6 18·8	·69
27	21 51 28·86	14 9 23·0	·7043551	5 27·4	336 26 52·6	1 6 22·8	·69
28	21 51 57·18	14 6 46·6	·7056750	5 23·9	336 32 16·9	1 6 26·8	·69
29	21 52 26·10	14 4 7·0	·7069873	5 20·4	336 37 41·3	1 6 30·7	·69
30	21 52 55·60	14 1 24·1	·7082919	5 17·0	336 43 5·7	1 6 34·7	·69
31	21 53 25·69	S. 13 58 38·1	0·7095884	5 13·6	336 48 30·1	S. 1 6 38·7	0·69

NOVEMBER, 1855.

At Transit over the Meridian of Greenwich.

of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	21 43 7·84	+ 0·43	1·47	S. 14 56 16·3	+ 2·6	19·8	1·8
2	21 43 18·42	0·46	1·46	14 55 13·1	2·7	19·8	1·8
3	21 43 29·77	0·49	1·46	14 54 6·0	2·9	19·7	1·8
4	21 43 41·86	0·52	1·46	14 52 55·1	3·0	19·7	1·8
5	21 43 54·70	0·55	1·45	14 51 40·4	3·2	19·6	1·8
6	21 44 8·28	0·58	1·45	14 50 21·8	3·3	19·5	1·8
7	21 44 22·61	0·61	1·45	14 48 59·5	3·5	19·5	1·8
8	21 44 37·67	0·64	1·44	14 47 33·4	3·7	19·4	1·8
9	21 44 53·46	0·67	1·43	14 46 3·4	3·9	19·3	1·8
10	21 45 9·98	0·70	1·42	14 44 29·8	4·0	19·2	1·8
11	21 45 27·22	0·73	1·42	14 42 52·4	4·1	19·2	1·8
12	21 45 45·18	0·76	1·42	14 41 11·3	4·3	19·1	1·8
13	21 46 3·84	0·79	1·42	14 39 26·5	4·4	19·1	1·8
14	21 46 23·20	0·82	1·41	14 37 38·0	4·6	19·0	1·8
15	21 46 43·25	0·85	1·41	14 35 45·9	4·7	18·9	1·8
16	21 47 4·00	0·88	1·41	14 33 50·2	4·9	18·9	1·8
17	21 47 25·42	0·91	1·40	14 31 50·9	5·0	18·8	1·7
18	21 47 47·51	0·93	1·39	14 29 48·0	5·2	18·7	1·7
19	21 48 10·26	0·96	1·39	14 27 41·7	5·4	18·7	1·7
20	21 48 33·67	0·99	1·38	14 25 31·8	5·5	18·6	1·7
21	21 48 57·72	1·02	1·37	14 23 18·5	5·6	18·5	1·7
22	21 49 22·42	1·04	1·37	14 21 1·8	5·8	18·5	1·7
23	21 49 47·74	1·07	1·36	14 18 41·6	5·9	18·5	1·7
24	21 50 13·70	1·09	1·36	14 16 18·1		18·5	1·7
25	21 50 40·27	1·12	1·36	14 13 51·3		18·4	1·
26	21 51 7·46	1·14	1·35	14 11 21·1		18·3	1
27	21 51 35·25	1·17	1·35	14 8		8·3	1
28	21 52 3·63	1·20	1·34	1		·2	
29	21 52 32·62	1·22	1·34			2	
30	21 53 2·18	1·24	1·33			1	
31	21 53 32·32	+ 1·27	1·33	S. 1			

DECEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*No*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	21 53 25·69	S. 13 58 38·1	0·7095884	5 13·6	336 48 30·1	S. 1 6 38·7	0·698
2	21 53 56·35	13 55 48·8	·7108767	5 10·2	336 53 54·5	1 6 42·6	·698
3	21 54 27·58	13 52 56·3	·7121565	5 6·7	336 59 19·0	1 6 46·5	·698
4	21 54 59·37	13 50 0·7	·7134276	5 3·3	337 4 43·5	1 6 50·4	·698
5	21 55 31·71	13 47 1·9	·7146897	4 59·9	337 10 8·0	1 6 54·4	·698
6	21 56 4·60	13 44 0·0	·7159427	4 56·6	337 15 32·5	1 6 58·3	·698
7	21 56 38·03	13 40 55·0	·7171862	4 53·2	337 20 57·1	1 7 2·1	·698
8	21 57 11·99	13 37 46·9	·7184200	4 49·8	337 26 21·7	1 7 6·0	·698
9	21 57 46·48	13 34 35·8	·7196440	4 46·5	337 31 46·3	1 7 9·9	·698
10	21 58 21·48	13 31 21·7	·7208579	4 43·1	337 37 11·0	1 7 13·8	·698
11	21 58 56·99	13 28 4·5	·7220614	4 39·8	337 42 35·7	1 7 17·6	·698
12	21 59 33·00	13 24 44·5	·7232544	4 36·4	337 48 0·4	1 7 21·4	·698
13	22 0 9·50	13 21 21·5	·7244366	4 33·1	337 53 25·1	1 7 25·3	·698
14	22 0 46·48	13 17 55·7	·7256080	4 29·8	337 58 49·9	1 7 29·1	·698
15	22 1 23·94	13 14 27·0	·7267683	4 26·5	338 4 14·7	1 7 32·9	·698
16	22 2 1·86	13 10 55·5	·7279174	4 23·2	338 9 39·5	1 7 36·7	·698
17	22 2 40·24	13 7 21·2	·7290551	4 19·9	338 15 4·3	1 7 40·5	·698
18	22 3 19·07	13 3 44·2	·7301813	4 16·6	338 20 29·2	1 7 44·3	·698
19	22 3 58·33	13 0 4·4	·7312959	4 13·3	338 25 54·1	1 7 48·1	·698
20	22 4 38·03	12 56 21·9	·7323988	4 10·0	338 31 19·0	1 7 51·9	·698
21	22 5 18·16	12 52 36·8	·7334898	4 6·8	338 36 44·0	1 7 55·6	·698
22	22 5 58·70	12 48 49·1	·7345689	4 3·5	338 42 9·0	1 7 59·4	·698
23	22 6 39·65	12 44 58·8	·7356359	4 0·3	338 47 34·0	1 8 3·1	·698
24	22 7 21·00	12 41 5·9	·7366908	3 57·0	338 52 59·0	1 8 6·8	·698
25	22 8 2·75	12 37 10·5	·7377335	3 53·8	338 58 24·1	1 8 10·5	·698
26	22 8 44·88	12 33 12·6	·7387638	3 50·6	339 3 49·2	1 8 14·3	·698
27	22 9 27·40	12 29 12·2	·7397816	3 47·3	339 9 14·3	1 8 18·0	·698
28	22 10 10·29	12 25 9·4	·7407868	3 44·1	339 14 39·4	1 8 21·6	·697
29	22 10 53·55	12 21 4·1	·7417794	3 40·9	339 20 4·6	1 8 25·3	·697
30	22 11 37·18	12 16 56·4	·7427592	3 37·7	339 25 29·8	1 8 29·0	·697
31	22 12 21·16	12 12 46·4	·7437261	3 34·5	339 30 55·0	1 8 32·6	·697
32	22 13 5·50	S. 12 8 34·0	0·7446800	3 31·4	339 36 20·2	S. 1 8 36·3	0·697

DECEMBER, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	21 53 32·32	+ 1·27	1·33	S. 13 58 1·5	+ 7·0	18·1	1·7
2	21 54 3·03	1·29	1·33	13 55 11·9	7·1	18·0	1·7
3	21 54 34·31	1·31	1·32	13 52 19·2	7·3	17·9	1·7
4	21 55 6·14	1·34	1·32	13 49 23·3	7·4	17·9	1·7
5	21 55 38·52	1·36	1·32	13 46 24·3	7·5	17·8	1·7
6	21 56 11·44	1·38	1·32	13 43 22·2	7·7	17·8	1·6
7	21 56 44·90	1·41	1·31	13 40 17·0	7·8	17·7	1·6
8	21 57 18·89	1·43	1·31	13 37 8·7	7·9	17·7	1·6
9	21 57 53·40	1·45	1·30	13 33 57·5	8·0	17·6	1·6
10	21 58 28·42	1·47	1·30	13 30 43·2	8·2	17·6	1·6
11	21 59 3·95	1·49	1·29	13 27 25·9	8·3	17·5	1·6
12	21 59 39·97	1·51	1·29	13 24 5·7	8·4	17·5	1·6
13	22 0 16·48	1·53	1·29	13 20 42·7	8·5	17·4	1·6
14	22 0 53·46	1·55	1·28	13 17 16·8	8·6	17·3	1·6
15	22 1 30·92	1·57	1·28	13 13 48·0	8·8	17·3	1·6
16	22 2 8·84	1·59	1·27	13 10 16·5	8·9	17·2	1·6
17	22 2 47·21	1·61	1·27	13 6 42·2	9·0	17·2	1·6
18	22 3 26·03	1·63	1·26	13 3 5·2	9·1	17·2	1·6
19	22 4 5·29	1·64	1·26	12 59 25·4	9·2	17·2	1·6
20	22 4 44·97	1·66	1·26	12 55 43·1	9·3	17·1	1·6
21	22 5 25·07	1·68	1·26	12 51 58·0	9·4	17·1	1·6
22	22 6 5·59	1·70	1·26	12 48 10·4	9·5	17·1	1·6
23	22 6 46·52	1·71	1·25	12 44 20·1	9·6	17·0	1·6
24	22 7 27·84	1·73	1·25	12 40 27·4	9·8	17·0	1·6
25	22 8 9·56	1·75	1·24	12 36 32·1		16·9	1·6
26	22 8 51·67	1·76	1·24	12 32 34·3		16·9	1·6
27	22 9 34·14	1·78	1·24	12 28 34·1		·8	1·6
28	22 10 17·00	1·79	1·23	12 24 31·4		8	1·6
29	22 11 0·22	1·81	1·23	12 20 26·3		3	1·6
30	22 11 43·80	1·82	1·23	12 16 18·8			1·
31	22 12 27·75	1·84	1·23	12 12 8·9			1·
32	22 13 12·04	+ 1·85	1·22	S. 12 7 56			1·

JANUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 35 37·77	N.20 17 22·6	0·9121759	9 51·6	73 24 42·5	S. 1 34 10·4	0·9557
2	4 35 21·40	20 17 0·9	·9126301	9 47·4	73 26 56·8	1 34 5·9	·9557
3	4 35 5·34	20 16 40·0	·9130979	9 43·2	73 29 11·1	1 34 1·3	·9557
4	4 34 49·61	20 16 19·8	·9135791	9 39·0	73 31 25·4	1 33 56·8	·9557
5	4 34 34·21	20 16 0·3	·9140735	9 34·8	73 33 39·7	1 33 52·3	·9557
6	4 34 19·15	20 15 41·6	·9145808	9 30·7	73 35 54·1	1 33 47·7	·9557
7	4 34 4·43	20 15 23·7	·9151010	9 26·5	73 38 8·4	1 33 43·2	·9557
8	4 33 50·07	20 15 6·7	·9156336	9 22·3	73 40 22·7	1 33 38·6	·9557
9	4 33 36·07	20 14 50·4	·9161786	9 18·2	73 42 37·0	1 33 34·1	·9557
10	4 33 22·44	20 14 35·0	·9167357	9 14·0	73 44 51·3	1 33 29·5	·9557
11	4 33 9·18	20 14 20·5	·9173046	9 9·9	73 47 5·7	1 33 25·0	·9557
12	4 32 56·31	20 14 6·8	·9178850	9 5·7	73 49 20·0	1 33 20·4	·9556
13	4 32 43·83	20 13 54·1	·9184768	9 1·6	73 51 34·3	1 33 15·9	·9556
14	4 32 31·74	20 13 42·2	·9190796	8 57·5	73 53 48·6	1 33 11·3	·9556
15	4 32 20·06	20 13 31·3	·9196932	8 53·3	73 56 3·0	1 33 6·7	·9556
16	4 32 8·79	20 13 21·3	·9203173	8 49·2	73 58 17·3	1 33 2·2	·9556
17	4 31 57·94	20 13 12·3	·9209516	8 45·1	74 0 31·6	1 32 57·6	·9556
18	4 31 47·51	20 13 4·2	·9215959	8 41·0	74 2 46·0	1 32 53·0	·9556
19	4 31 37·51	20 12 57·1	·9222497	8 36·9	74 5 0·3	1 32 48·5	·9556
20	4 31 27·94	20 12 51·0	·9229129	8 32·8	74 7 14·7	1 32 43·9	·9556
21	4 31 18·81	20 12 45·9	·9235851	8 28·7	74 9 29·0	1 32 39·3	·9556
22	4 31 10·12	20 12 41·8	·9242660	8 24·7	74 11 43·4	1 32 34·7	·9556
23	4 31 1·88	20 12 38·8	·9249553	8 20·6	74 13 57·7	1 32 30·2	·9556
24	4 30 54·09	20 12 36·8	·9256527	8 16·5	74 16 12·0	1 32 25·6	·9556
25	4 30 46·76	20 12 35·8	·9263579	8 12·5	74 18 26·4	1 32 21·0	·9556
26	4 30 39·87	20 12 35·9	·9270706	8 8·4	74 20 40·8	1 32 16·4	·9556
27	4 30 33·45	20 12 37·0	·9277905	8 4·4	74 22 55·1	1 32 11·8	·9556
28	4 30 27·49	20 12 39·1	·9285173	8 0·4	74 25 9·4	1 32 7·2	·9556
29	4 30 21·99	20 12 42·3	·9292507	7 56·3	74 27 23·8	1 32 2·6	·9556
30	4 30 16·95	20 12 46·6	·9299905	7 52·3	74 29 38·1	1 31 58·0	·9556
31	4 30 12·38	20 12 51·9	·9307363	7 48·3	74 31 52·5	1 31 53·4	·9556
32	4 30 8·28	N.20 12 58·2	0·9314878	7 44·3	74 34 6·8	S. 1 31 48·8	0·9556

JANUARY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
4 35 31·00	— 0·68	0·69	N.20 17 13·6	— 0·9	9·2	1·0
4 35 14·81	0·66	0·69	20 16 52·3	0·9	9·2	1·0
4 34 58·93	0·65	0·69	20 16 31·7	0·8	9·2	1·0
4 34 43·38	0·64	0·69	20 16 11·9	0·8	9·2	1·0
4 34 28·15	0·63	0·69	20 15 52·8	0·8	9·2	1·0
4 34 13·27	0·61	0·69	20 15 34·5	0·7	9·2	1·0
4 33 58·74	0·60	0·69	20 15 16·9	0·7	9·2	1·0
4 33 44·56	0·58	0·69	20 15 0·2	0·7	9·1	1·0
4 33 30·74	0·57	0·69	20 14 44·3	0·6	9·1	1·0
4 33 17·29	0·55	0·69	20 14 29·3	0·6	9·1	1·0
4 33 4·22	0·54	0·69	20 14 15·2	0·6	9·1	1·0
4 32 51·53	0·52	0·69	20 14 1·9	0·5	9·1	1·0
4 32 39·23	0·50	0·69	20 13 49·5	0·5	9·1	1·0
4 32 27·33	0·49	0·69	20 13 38·0	0·5	9·1	1·0
4 32 15·84	0·47	0·69	20 13 27·5	0·4	9·1	1·0
4 32 4·75	0·45	0·68	20 13 17·9	0·4	9·0	1·0
4 31 54·09	0·44	0·68	20 13 9·2	0·3	9·0	1·0
4 31 43·84	0·42	0·68	20 13 1·5	0·3	9·0	1·0
4 31 34·02	0·40	0·68	20 12 54·8	0·3	9·0	1·0
4 31 24·64	0·38	0·68	20 12 49·1	0·2	9·0	1·0
4 31 15·69	0·36	0·68	20 12 44·4	0·2	9·0	1·0
4 31 7·18	0·35	0·68	20 12 40·7	0·1	9·0	1·0
4 30 59·12	0·33	0·68	20 12 38·0	— 0·1	8·9	1·0
4 30 51·51	0·31	0·68	20 12 36·3	0	9	1·0
4 30 44·35	0·29	0·68	20 12 35·7			1·
4 30 37·64	0·27	0·68	20 12 36·1			1
4 30 31·39	0·25	0·68	20 12 37·6			1
4 30 25·60	0·23	0·68	20 12 40·1			
4 30 20·27	0·21	0·67	20 12 43·(			
4 30 15·40	0·19	0·67	20 12 48·			
4 30 11·00	0·17	0·67	20 12 53			
4 30 7·06	— 0·15	0·67	N.20 13 0			

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 30 8·28	N.20 12 58·2	0·9314878	7 44·3	74 34 6·8	S.1 31 48·8	0·9556
2	4 30 4·65	20 13 5·6	·9322449	7 40·4	74 36 21·2	1 31 44·2	·9556
3	4 30 1·49	20 13 14·0	·9330071	7 36·4	74 38 35·6	1 31 39·6	·9556
4	4 29 58·81	20 13 23·5	·9337743	7 32·4	74 40 49·9	1 31 35·0	·9556
5	4 29 56·60	20 13 34·1	·9345462	7 28·4	74 43 4·3	1 31 30·3	·9555
6	4 29 54·87	20 13 45·7	·9353224	7 24·5	74 45 18·6	1 31 25·7	·9555
7	4 29 53·61	20 13 58·3	·9361028	7 20·5	74 47 33·0	1 31 21·1	·9555
8	4 29 52·83	20 14 12·0	·9368870	7 16·6	74 49 47·4	1 31 16·5	·9555
9	4 29 52·53	20 14 26·8	·9376748	7 12·6	74 52 1·7	1 31 11·9	·9555
10	4 29 52·70	20 14 42·6	·9384660	7 8·7	74 54 16·1	1 31 7·3	·9555
11	4 29 53·36	20 14 59·5	·9392602	7 4·8	74 56 30·5	1 31 2·6	·9555
12	4 29 54·49	20 15 17·4	·9400572	7 0·9	74 58 44·8	1 30 58·0	·9555
13	4 29 56·11	20 15 36·3	·9408567	6 57·0	75 0 59·2	1 30 53·4	·9555
14	4 29 58·20	20 15 56·3	·9416585	6 53·1	75 3 13·6	1 30 48·7	·9555
15	4 30 0·78	20 16 17·3	·9424623	6 49·2	75 5 27·9	1 30 44·1	·9555
16	4 30 3·83	20 16 39·3	·9432678	6 45·3	75 7 42·3	1 30 39·4	·9555
17	4 30 7·37	20 17 2·4	·9440748	6 41·4	75 9 56·7	1 30 34·8	·9555
18	4 30 11·38	20 17 26·5	·9448829	6 37·6	75 12 11·1	1 30 30·2	·9555
19	4 30 15·87	20 17 51·5	·9456919	6 33·7	75 14 25·4	1 30 25·5	·9555
20	4 30 20·83	20 18 17·6	·9465015	6 29·9	75 16 39·8	1 30 20·9	·9555
21	4 30 26·27	20 18 44·7	·9473115	6 26·0	75 18 54·2	1 30 16·2	·9555
22	4 30 32·18	20 19 12·7	·9481215	6 22·2	75 21 8·6	1 30 11·6	·9555
23	4 30 38·56	20 19 41·8	·9489314	6 18·4	75 23 23·0	1 30 6·9	·9555
24	4 30 45·40	20 20 11·7	·9497407	6 14·6	75 25 37·3	1 30 2·2	·9555
25	4 30 52·71	20 20 42·6	·9505494	6 10·8	75 27 51·7	1 29 57·6	·9555
26	4 31 0·48	20 21 14·4	·9513570	6 7·0	75 30 6·1	1 29 52·9	·9555
27	4 31 8·71	20 21 47·1	·9521635	6 3·2	75 32 20·5	1 29 48·2	·9555
28	4 31 17·39	20 22 20·6	·9529684	5 59·4	75 34 34·9	1 29 43·6	·9555
29	4 31 26·52	N.20 22 55·1	0·9537718	5 55·6	75 36 49·2	S.1 29 38·9	0·9555

FEBRUARY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	4 30 7·06	− 0·15	0·67	N.20 13 0·5	+ 0·3	8·8	1·0
2	4 30 3·59	0·13	0·67	20 13 8·2	0·3	8·8	1·0
3	4 30 0·59	0·12	0·67	20 13 16·9	0·4	8·8	1·0
4	4 29 58·06	0·10	0·66	20 13 26·7	0·4	8·7	1·0
5	4 29 56·01	0·08	0·66	20 13 37·5	0·5	8·7	1·0
6	4 29 54·43	0·06	0·66	20 13 49·4	0·5	8·7	1·0
7	4 29 53·32	0·04	0·66	20 14 2·4	0·6	8·7	1·0
8	4 29 52·69	− 0·02	0·66	20 14 16·4	0·6	8·7	1·0
9	4 29 52·53	0·00	0·66	20 14 31·4	0·7	8·7	1·0
10	4 29 52·85	+ 0·02	0·65	20 14 47·5	0·7	8·6	1·0
11	4 29 53·64	0·04	0·65	20 15 4·6	0·7	8·6	1·0
12	4 29 54·92	0·06	0·65	20 15 22·8	0·8	8·6	1·0
	4 29 56·67	0·08	0·65	20 15 42·0	0·8	8·6	1·0
	4 29 58·89	0·10	0·65	20 16 2·2	0·9	8·6	1·0
	4 30 1·60	0·12	0·65	20 16 23·4	0·9	8·6	1·0
	4 30 4·78	0·14	0·65	20 16 45·7	1·0	8·5	1·0
	4 30 8·44	0·16	0·65	20 17 9·0	1·0	8·5	1·0
	4 30 12·57	0·18	0·65	20 17 33·3	1·0	8·5	1·0
	4 30 17·18	0·20	0·65	20 17 58·5	1·1	8·5	1·0
	4 30 22·26	0·22	0·65	20 18 24·8	1·1	8·5	1·0
	4 30 27·81	0·24	0·65	20 18 52·1	1·2	8·5	1·0
	4 30 33·83	0·26	0·64	20 19 20·3	1·2	8·4	1·0
	4 30 40·31	0·28	0·64	20 19 49·5	1·2	8·4	1·0
	4 30 47·26	0·30	0·64	20 20 19·6	1·2	8·4	1·0
	4 30 54·67	0·32	0·64	20 20 50·		8·4	1·0
	4 31 2·53	0·34	0·64	20 21 22		8·4	1·0
	4 31 10·85	0·35	0·64	20 21 55		8·4	0
20	4 31 19·62	0·37	0·63	20 22 2		8·3	
29	4 31 28·84	+ 0·39	0·63	N.20 23		8·3	

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vec.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 30 8·28	N.20 12 58·2	0·9314878	7 44·3	74 34 6·8	S.1 31 48·8	0·9556
2	4 30 4·65	20 13 5·6	·9322449	7 40·4	74 36 21·2	1 31 44·2	·9556
3	4 30 1·49	20 13 14·0	·9330071	7 36·4	74 38 35·6	1 31 39·6	·9556
4	4 29 58·81	20 13 23·5	·9337743	7 32·4	74 40 49·9	1 31 35·0	·9556
5	4 29 56·60	20 13 34·1	·9345462	7 28·4	74 43 4·3	1 31 30·3	·9555
6	4 29 54·87	20 13 45·7	·9353224	7 24·5	74 45 18·6	1 31 25·7	·9555
7	4 29 53·61	20 13 58·3	·9361028	7 20·5	74 47 33·0	1 31 21·1	·9555
8	4 29 52·83	20 14 12·0	·9368870	7 16·6	74 49 47·4	1 31 16·5	·9555
9	4 29 52·53	20 14 26·8	·9376748	7 12·6	74 52 1·7	1 31 11·9	·9555
10	4 29 52·70	20 14 42·6	·9384660	7 8·7	74 54 16·1	1 31 7·3	·9555
11	4 29 53·36	20 14 59·5	·9392602	7 4·8	74 56 30·5	1 31 2·6	·9555
12	4 29 54·49	20 15 17·4	·9400572	7 0·9	74 58 44·8	1 30 58·0	·9555
13	4 29 56·11	20 15 36·3	·9408567	6 57·0	75 0 59·2	1 30 53·4	·9555
14	4 29 58·20	20 15 56·3	·9416585	6 53·1	75 3 13·6	1 30 48·7	·9555
15	4 30 0·78	20 16 17·3	·9424623	6 49·2	75 5 27·9	1 30 44·1	·9555
16	4 30 3·83	20 16 39·3	·9432678	6 45·3	75 7 42·3	1 30 39·4	·9555
17	4 30 7·37	20 17 2·4	·9440748	6 41·4	75 9 56·7	1 30 34·8	·9555
18	4 30 11·38	20 17 26·5	·9448829	6 37·6	75 12 11·1	1 30 30·2	·9555
19	4 30 15·87	20 17 51·5	·9456919	6 33·7	75 14 25·4	1 30 25·5	·9555
20	4 30 20·83	20 18 17·6	·9465015	6 29·9	75 16 39·8	1 30 20·9	·9555
21	4 30 26·27	20 18 44·7	·9473115	6 26·0	75 18 54·2	1 30 16·2	·9555
22	4 30 32·18	20 19 12·7	·9481215	6 22·2	75 21 8·6	1 30 11·6	·9555
23	4 30 38·56	20 19 41·8	·9489314	6 18·4	75 23 23·0	1 30 6·9	·9555
24	4 30 45·40	20 20 11·7	·9497407	6 14·6	75 25 37·3	1 30 2·2	·9555
25	4 30 52·71	20 20 42·6	·9505494	6 10·8	75 27 51·7	1 29 57·6	·9555
26	4 31 0·48	20 21 14·4	·9513570	6 7·0	75 30 6·1	1 29 52·9	·9555
27	4 31 8·71	20 21 47·1	·9521635	6 3·2	75 32 20·5	1 29 48·2	·9555
28	4 31 17·39	20 22 20·6	·9529684	5 59·4	75 34 34·9	1 29 43·6	·9555
29	4 31 26·52	N.20 22 55·1	0·9537718	5 55·6	75 36 49·2	S.1 29 38·9	0·9555

FEBRUARY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	4 30 7·06	− 0·15	0·67	N.20 13 0·5	+ 0·3	8·8	1·0
2	4 30 3·59	0·13	0·67	20 13 8·2	0·3	8·8	1·0
3	4 30 0·59	0·12	0·67	20 13 16·9	0·4	8·8	1·0
4	4 29 58·06	0·10	0·66	20 13 26·7	0·4	8·7	1·0
5	4 29 56·01	0·08	0·66	20 13 37·5	0·5	8·7	1·0
6	4 29 54·43	0·06	0·66	20 13 49·4	0·5	8·7	1·0
7	4 29 53·32	0·04	0·66	20 14 2·4	0·6	8·7	1·0
8	4 29 52·69	− 0·02	0·66	20 14 16·4	0·6	8·7	1·0
9	4 29 52·53	0·00	0·66	20 14 31·4	0·7	8·7	1·0
10	4 29 52·85	+ 0·02	0·65	20 14 47·5	0·7	8·6	1·0
11	4 29 53·64	0·04	0·65	20 15 4·6	0·7	8·6	1·0
12	4 29 54·92	0·06	0·65	20 15 22·8	0·8	8·6	1·0
13	4 29 56·67	0·08	0·65	20 15 42·0	0·8	8·6	1·0
14	4 29 58·89	0·10	0·65	20 16 2·2	0·9	8·6	1·0
15	4 30 1·60	0·12	0·65	20 16 23·4	0·9	8·6	1·0
16	4 30 4·78	0·14	0·65	20 16 45·7	1·0	8·5	1·0
17	4 30 8·44	0·16	0·65	20 17 9·0	1·0	8·5	1·0
18	4 30 12·57	0·18	0·65	20 17 33·3	1·0	8·5	1·0
19	4 30 17·18	0·20	0·65	20 17 58·5	1·1	8·5	1·0
20	4 30 22·26	0·22	0·65	20 18 24·8	1·1	8·5	1·0
21	4 30 27·81	0·24	0·65	20 18 52·1	1·2	8·5	1·0
22	4 30 33·83	0·26	0·64	20 19 20·3	1·2	8·4	1·0
23	4 30 40·31	0·28	0·64	20 19 49·5	1·2	8·4	1·0
24	4 30 47·26	0·30	0·64	20 20 19·6	1·3	8·4	1·0
25	4 30 54·67	0·32	0·64	20 20 50·7	1·3	8·4	1·0
26	4 31 2·53	0·34	0·64	20 21 22·6	1·4	8·4	1·0
27	4 31 10·85	0·35	0·64	20 21 55·4	1·4	8·4	1·0
28	4 31 19·62	0·37	0·63	20 22 29·1	1·4	8·3	1·0
29	4 31 28·84	+ 0·39	0·63	N.20 23 3·7	+ 1·5	8·3	1·0

MARCH, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*No*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 31 26·52	N.20 22 55·1	0·9537718	5 55·6	75 36 49·2	S. 1 29 38·9	0·95
2	4 31 36·10	20 23 30·4	·9545734	5 51·8	75 39 3·6	1 29 34·2	·95
3	4 31 46·13	20 24 6·5	·9553731	5 48·1	75 41 18·0	1 29 29·5	·95
4	4 31 56·60	20 24 43·5	·9561705	5 44·3	75 43 32·4	1 29 24·8	·95
5	4 32 7·51	20 25 21·3	·9569657	5 40·6	75 45 46·8	1 29 20·2	·95
6	4 32 18·86	20 26 0·0	·9577584	5 36·8	75 48 1·2	1 29 15·5	·95
7	4 32 30·65	20 26 39·4	·9585484	5 33·1	75 50 15·6	1 29 10·8	·95
8	4 32 42·87	20 27 19·6	·9593354	5 29·4	75 52 30·0	1 29 6·1	·95
9	4 32 55·52	20 28 0·6	·9601193	5 25·7	75 54 44·4	1 29 1·4	·95
10	4 33 8·59	20 28 42·4	·9608999	5 21·9	75 56 58·8	1 28 56·7	·95
11	4 33 22·09	20 29 24·9	·9616769	5 18·2	75 59 13·2	1 28 52·0	·95
12	4 33 36·01	20 30 8·1	·9624503	5 14·5	76 1 27·6	1 28 47·3	·95
13	4 33 50·34	20 30 52·0	·9632197	5 10·8	76 3 42·0	1 28 42·6	·95
14	4 34 5·09	20 31 36·7	·9639851	5 7·2	76 5 56·4	1 28 37·9	·95
15	4 34 20·25	20 32 22·0	·9647462	5 3·5	76 8 10·8	1 28 33·2	·95
16	4 34 35·82	20 33 7·9	·9655028	4 59·8	76 10 25·2	1 28 28·5	·95
17	4 34 51·79	20 33 54·5	·9662548	4 56·1	76 12 39·6	1 28 23·8	·95
18	4 35 8·16	20 34 41·7	·9670021	4 52·5	76 14 54·0	1 28 19·1	·95
19	4 35 24·93	20 35 29·5	·9677443	4 48·8	76 17 8·5	1 28 14·4	·95
20	4 35 42·08	20 36 17·9	·9684813	4 45·2	76 19 22·9	1 28 9·6	·95
21	4 35 59·63	20 37 6·9	·9692130	4 41·5	76 21 37·3	1 28 4·9	·95
22	4 36 17·55	20 37 56·4	·9699391	4 37·9	76 23 51·7	1 28 0·2	·95
23	4 36 35·85	20 38 46·5	·9706595	4 34·3	76 26 6·2	1 27 55·5	·95
24	4 36 54·53	20 39 37·1	·9713740	4 30·6	76 28 20·6	1 27 50·7	·95
25	4 37 13·58	20 40 28·2	·9720826	4 27·0	76 30 35·0	1 27 46·0	·95
26	4 37 32·98	20 41 19·8	·9727851	4 23·4	76 32 49·4	1 27 41·3	·95
27	4 37 52·75	20 42 11·8	·9734813	4 19·8	76 35 3·9	1 27 36·5	·95
28	4 38 12·87	20 43 4·3	·9741711	4 16·2	76 37 18·3	1 27 31·8	·95
29	4 38 33·34	20 43 57·1	·9748545	4 12·6	76 39 32·7	1 27 27·1	·95
30	4 38 54·15	20 44 50·4	·9755312	4 9·1	76 41 47·2	1 27 22·3	·95
31	4 39 15·30	20 45 44·0	·9762013	4 5·5	76 44 1·6	1 27 17·6	·95
32	4 39 36·79	N.20 46 37·9	0·9768645	4 1·9	76 46 16·1	S. 1 27 12·8	0·95

MARCH, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
4 31 28·84	+ 0·39	0·63	N.20 23 3·7	+ 1·5	8·3	1·0
4 31 38·51	0·41	0·63	20 23 39·1	1·5	8·3	1·0
4 31 48·62	0·43	0·63	20 24 15·4	1·5	8·3	1·0
4 31 59·17	0·45	0·63	20 24 52·5	1·6	8·3	0·9
4 32 10·16	0·47	0·63	20 25 30·4	1·6	8·3	0·9
4 32 21·58	0·49	0·63	20 26 9·1	1·6	8·3	0·9
4 32 33·44	0·50	0·63	20 26 48·7	1·7	8·3	0·9
4 32 45·72	0·52	0·63	20 27 29·0	1·7	8·3	0·9
4 32 58·44	0·54	0·63	20 28 10·0	1·7	8·3	0·9
4 33 11·57	0·56	0·63	20 28 51·8	1·8	8·3	0·9
4 33 25·13	0·57	0·63	20 29 34·4	1·8	8·3	0·9
4 33 39·10	0·59	0·63	20 30 17·6	1·8	8·2	0·9
4 33 53·49	0·61	0·63	20 31 1·6	1·8	8·2	0·9
4 34 8·29	0·63	0·63	20 31 46·3	1·9	8·2	0·9
4 34 23·50	0·64	0·63	20 32 31·6	1·9	8·2	0·9
4 34 39·11	0·66	0·63	20 33 17·6	1·9	8·2	0·9
4 34 55·12	0·68	0·63	20 34 4·1	2·0	8·2	0·9
4 35 11·53	0·69	0·62	20 34 51·3	2·0	8·1	0·9
4 35 28·34	0·71	0·62	20 35 39·1	2·0	8·1	0·9
4 35 45·53	0·72	0·62	20 36 27·5	2·0	8·1	0·9
4 36 3·10	0·74	0·62	20 37 16·5	2·1	8·1	0·9
4 36 21·05	0·76	0·62	20 38 6·0	2·1	8·1	0·9
4 36 39·38	0·77	0·62	20 38 56·1	2·1	8·1	0·9
4 36 58·08	0·79	0·62	20 39 46·7	2·1	8·1	0·9
4 37 17·15	0·80	0·62	20 40 37·7		8·0	0·9
4 37 36·57	0·82	0·62	20 41 29·3		8·0	0·9
4 37 56·36	0·83	0·62	20 42 21·[illegible]		8·0	0·9
4 38 16·49	0·85	0·62	20 43 [illegible]		[illegible]	
4 38 36·96	0·86	0·62	20 44			
4 38 57·78	0·87	0·62	20 44			
4 39 18·94	0·89	0·62	20 45			
4 39 40·43	+ 0·90	0·62	N.20 46			

APRIL, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 39 36·79	N.20 46 37·9	0·9768645	4 1·9	76 46 16·1	S.1 27 12·8	0·955
2	4 39 58·61	20 47 32·2	·9775208	3 58·3	76 48 30·5	1 27 8·1	·955
3	4 40 20·75	20 48 26·9	·9781700	3 54·8	76 50 45·0	1 27 3·3	·955
4	4 40 43·22	20 49 21·9	·9788121	3 51·2	76 52 59·4	1 26 58·6	·955
5	4 41 6·00	20 50 17·2	·9794470	3 47·6	76 55 13·9	1 26 53·8	·955
6	4 41 29·10	20 51 12·8	·9800745	3 44·1	76 57 28·3	1 26 49·1	·955
7	4 41 52·51	20 52 8·7	·9806946	3 40·6	76 59 42·8	1 26 44·3	·955
8	4 42 16·22	20 53 4·8	·9813070	3 37·0	77 1 57·3	1 26 39·6	·955
9	4 42 40·24	20 54 1·1	·9819118	3 33·5	77 4 11·7	1 26 34·8	·955
10	4 43 4·55	20 54 57·6	·9825088	3 30·0	77 6 26·2	1 26 30·0	·955
11	4 43 29·16	20 55 54·3	·9830979	3 26·4	77 8 40·7	1 26 25·3	·955
12	4 43 54·06	20 56 51·1	·9836790	3 22·9	77 10 55·2	1 26 20·5	·955
13	4 44 19·24	20 57 48·1	·9842520	3 19·4	77 13 9·7	1 26 15·7	·955
14	4 44 44·70	20 58 45·3	·9848168	3 15·9	77 15 24·1	1 26 11·0	·955
15	4 45 10·44	20 59 42·6	·9853733	3 12·4	77 17 38·6	1 26 6·2	·955
16	4 45 36·45	21 0 40·0	·9859214	3 8·9	77 19 53·1	1 26 1·4	·955
17	4 46 2·72	21 1 37·6	·9864611	3 5·4	77 22 7·6	1 25 56·6	·955
18	4 46 29·26	21 2 35·2	·9869921	3 1·9	77 24 22·1	1 25 51·8	·955
19	4 46 56·05	21 3 32·9	·9875145	2 58·4	77 26 36·6	1 25 47·1	·955
20	4 47 23·09	21 4 30·6	·9880282	2 54·9	77 28 51·1	1 25 42·3	·955
21	4 47 50·37	21 5 28·3	·9885330	2 51·5	77 31 5·6	1 25 37·5	·955
22	4 48 17·89	21 6 26·0	·9890288	2 48·0	77 33 20·1	1 25 32·7	·955
23	4 48 45·65	21 7 23·7	·9895157	2 44·5	77 35 34·6	1 25 27·9	·955
24	4 49 13·63	21 8 21·3	·9899936	2 41·0	77 37 49·1	1 25 23·1	·955
25	4 49 41·84	21 9 18·9	·9904623	2 37·6	77 40 3·7	1 25 18·3	·955
26	4 50 10·27	21 10 16·4	·9909220	2 34·1	77 42 18·2	1 25 13·5	·955
27	4 50 38·91	21 11 13·8	·9913724	2 30·7	77 44 32·7	1 25 8·7	·955
28	4 51 7·76	21 12 11·2	·9918137	2 27·2	77 46 47·2	1 25 3·9	·955
29	4 51 36·82	21 13 8·4	·9922457	2 23·8	77 49 1·8	1 24 59·1	·955
30	4 52 6·07	21 14 5·5	·9926683	2 20·3	77 51 16·3	1 24 54·3	·955
31	4 52 35·53	N.21 15 2·5	0·9930817	2 16·9	77 53 30·9	S.1 24 49·5	0·955

APRIL, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
4 39 40·43	+ 0·90	0·62	N.20 46 47·0	+ 2·3	8·0	0·9
4 40 2·25	0·92	0·61	20 47 41·3	2·3	7·9	0·9
4 40 24·39	0·93	0·61	20 48 35·8	2·3	7·9	0·9
4 40 46·85	0·94	0·61	20 49 30·8	2·3	7·9	0·9
4 41 9·63	0·96	0·61	20 50 26·0	2·3	7·9	0·9
4 41 32·72	0·97	0·61	20 51 21·5	2·3	7·9	0·9
4 41 56·12	0·98	0·61	20 52 17·3	2·3	7·9	0·9
4 42 19·82	0·99	0·61	20 53 13·3	2·3	7·9	0·9
4 42 43·83	1·01	0·61	20 54 9·5	2·3	7·9	0·9
4 43 8·12	1·02	0·60	20 55 5·9	2·4	7·8	0·9
4 43 32·71	1·03	0·60	20 56 2·4	2·4	7·8	0·9
4 43 57·59	1·04	0·60	20 56 59·2	2·4	7·8	0·9
4 44 22·75	1·05	0·60	20 57 56·1	2·4	7·8	0·9
4 44 48·18	1·06	0·60	20 58 53·1	2·4	7·8	0·9
4 45 13·90	1·08	0·60	20 59 50·3	2·4	7·8	0·9
4 45 39·88	1·09	0·60	21 0 47·5	2·4	7·8	0·9
4 46 6·12	1·10	0·60	21 1 45·0	2·4	7·8	0·9
4 46 32·63	1·11	0·60	21 2 42·5	2·4	7·8	0·9
4 46 59·38	1·12	0·59	21 3 40·0	2·4	7·7	0·9
4 47 26·38	1·13	0·59	21 4 37·6	2·4	7·7	0·9
4 47 53·63	1·14	0·59	21 5 35·2	2·4	7·7	0·9
4 48 21·11	1·15	0·59	21 6 32·7	2·4	7·7	0·9
4 48 48·83	1·16	0·59	21 7 30·2	2·4	7·7	0·9
4 49 16·78	1·17	0·59	21 8 27·7	2·4	7·7	0·9
4 49 44·94	1·18	0·59	21 9 25·2	2·4	7·7	0·9
4 50 13·32	1·19	0·59	21 10 22·5	2·4	7·7	0·9
4 50 41·92	1·20	0·59	21 11 19·8	2·4	7·7	0·9
4 51 10·72	1·20	0·59	21 12 17·0	2·4	7·7	0·9
4 51 39·73	1·21	0·59	21 13 14·1	2·4	7·7	0·9
4 52 8·94	1·22	0·59	21 14 11·1	2·4	7·6	0·9
4 52 38·34	+ 1·23	0·59	N.21 15 7·9	+ 2·4	7·6	0·9

MAY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	4 52 35·53	N.21 15 2·5	0·9930817	2 16·9	77 53 30·9	S.1 24 49·5	0·955
2	4 53 5·17	21 15 59·3	·9934857	2 13·4	77 55 45·4	1 24 44·6	·955
3	4 53 35·00	21 16 56·0	·9938802	2 10·0	77 58 0·0	1 24 39·8	·955
4	4 54 5·01	21 17 52·4	·9942653	2 6·6	78 0 14·5	1 24 35·0	·955
5	4 54 35·21	21 18 48·7	·9946409	2 3·1	78 2 29·1	1 24 30·2	·955
6	4 55 5·58	21 19 44·7	·9950068	1 59·7	78 4 43·7	1 24 25·4	·955
7	4 55 36·11	21 20 40·5	·9953632	1 56·3	78 6 58·2	1 24 20·5	·955
8	4 56 6·82	21 21 36·1	·9957099	1 52·9	78 9 12·8	1 24 15·7	·955
9	4 56 37·69	21 22 31·5	·9960469	1 49·4	78 11 27·4	1 24 10·9	·955
10	4 57 8·72	21 23 26·6	·9963741	1 46·0	78 13 41·9	1 24 6·0	·955
11	4 57 39·90	21 24 21·5	·9966915	1 42·6	78 15 56·5	1 24 1·2	·955
12	4 58 11·23	21 25 16·1	·9969991	1 39·2	78 18 11·1	1 23 56·4	·955
13	4 58 42·70	21 26 10·4	·9972967	1 35·8	78 20 25·7	1 23 51·5	·955
14	4 59 14·31	21 27 4·4	·9975843	1 32·4	78 22 40·3	1 23 46·7	·955
15	4 59 46·05	21 27 58·1	·9978619	1 29·0	78 24 54·9	1 23 41·8	·955
16	5 0 17·92	21 28 51·5	·9981294	1 25·6	78 27 9·5	1 23 37·0	·955
17	5 0 49·92	21 29 44·5	·9983868	1 22·2	78 29 24·1	1 23 32·1	·955
18	5 1 22·03	21 30 37·1	·9986341	1 18·8	78 31 38·7	1 23 27·3	·955
19	5 1 54·25	21 31 29·4	·9988713	1 15·4	78 33 53·3	1 23 22·4	·955
20	5 2 26·59	21 32 21·3	·9990983	1 12·0	78 36 7·9	1 23 17·6	·955
21	5 2 59·02	21 33 12·8	·9993151	1 8·6	78 38 22·5	1 23 12·7	·955
22	5 3 31·55	21 34 3·9	·9995217	1 5·2	78 40 37·1	1 23 7·8	·955
23	5 4 4·18	21 34 54·6	·9997182	1 1·8	78 42 51·7	1 23 3·0	·955
24	5 4 36·90	21 35 44·9	0·9999044	0 58·4	78 45 6·3	1 22 58·1	·955
25	5 5 9·70	21 36 34·7	1·0000805	0 55·0	78 47 20·9	1 22 53·2	·955
26	5 5 42·58	21 37 24·1	·0002463	0 51·6	78 49 35·6	1 22 48·4	·955
27	5 6 15·53	21 38 13·1	·0004019	0 48·3	78 51 50·2	1 22 43·5	·955
28	5 6 48·56	21 39 1·6	·0005473	0 44·9	78 54 4·8	1 22 38·6	·955
29	5 7 21·65	21 39 49·6	·0006825	0 41·5	78 56 19·5	1 22 33·7	·955
30	5 7 54·80	21 40 37·2	·0008075	0 38·1	78 58 34·1	1 22 28·9	·955
31	5 8 28·01	21 41 24·3	·0009222	0 34·7	79 0 48·8	1 22 24·0	·955
32	5 9 1·28	N.21 42 10·9	1·0010267	0 31·3	79 3 3·4	S.1 22 19·1	0·955

MAY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	4 52 38·34	+ 1·23	0·59	N.21 15 7·9	+ 2·4	7·6	0·9
2	4 53 7·93	1·24	0·59	21 16 4·6	2·4	7·6	0·9
3	4 53 37·70	1·24	0·59	21 17 1·1	2·4	7·6	0·9
4	4 54 7·66	1·25	0·59	21 17 57·4	2·3	7·6	0·9
5	4 54 37·80	1·26	0·59	21 18 53·5	2·3	7·6	0·9
6	4 55 8·11	1·27	0·59	21 19 49·4	2·3	7·6	0·9
7	4 55 38·59	1·27	0·59	21 20 45·0	2·3	7·6	0·9
8	4 56 9·23	1·28	0·59	21 21 40·5	2·3	7·6	0·9
9	4 56 40·04	1·29	0·59	21 22 35·7	2·3	7·6	0·9
10	4 57 11·01	1·29	0·59	21 23 30·7	2·3	7·6	0·9
11	4 57 42·12	1·30	0·59	21 24 25·4	2·3	7·6	0·9
12	4 58 13·38	1·31	0·59	21 25 19·9	2·3	7·6	0·9
13	4 58 44·79	1·31	0·59	21 26 14·0	2·3	7·6	0·9
14	4 59 16·34	1·32	0·59	21 27 7·9	2·2	7·6	0·9
15	4 59 48·02	1·32	0·59	21 28 1·4	2·2	7·6	0·9
16	5 0 19·82	1·33	0·58	21 28 54·6	2·2	7·5	0·9
17	5 0 51·74	1·33	0·58	21 29 47·5	2·2	7·5	0·9
18	5 1 23·79	1·34	0·58	21 30 40·0	2·2	7·5	0·9
19	5 1 55·94	1·34	0·58	21 31 32·1	2·2	7·5	0·9
20	5 2 28·20	1·35	0·58	21 32 23·9	2·1	7·5	0·9
21	5 3 0·57	1·35	0·58	21 33 15·2	2·1	7·5	0·9
22	5 3 33·03	1·35	0·58	21 34 6·2	2·1	7·5	0·9
23	5 4 5·58	1·36	0·58	21 34 56·8	2·1	7·5	0·9
24	5 4 38·23	1·36	0·58	21 35 46·9	2·1	7·5	0·9
25	5 5 10·95	1·37	0·58	21 36 36·6	2·1	7·5	0·9
26	5 5 43·76	1·37	0·58	21 37 25·9	2·0	7·5	0·9
27	5 6 16·64	1·37	0·58	21 38 14·7	2·0	7·5	0·9
28	5 6 49·59	1·37	0·58	21 39 3·1	2·0		0·9
29	5 7 22·60	1·38	0·58	21 39 51·0	2·0		0·9
30	5 7 55·68	1·38	0·58	21 40 38·4	2		0·9
31	5 8 28·81	1·38	0·58	21 41 25·4	1		0·9
32	5 9 2·00	+ 1·38	0·58	N.21 42 11·9	+		·9

JUNE, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*No*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 9 1·28	N.21 42 10·9	1·0010267	0 31·3	79 3 3·4	S.1 22 19·1	0·95
2	5 9 34·59	21 42 57·0	·0011210	0 27·9	79 5 18·1	1 22 14·2	·95
3	5 10 7·95	21 43 42·6	·0012050	0 24·6	79 7 32·7	1 22 9·3	·95
4	5 10 41·35	21 44 27·7	·0012788	0 21·2	79 9 47·4	1 22 4·4	·95
5	5 11 14·78	21 45 12·4	·0013423	0 17·8	79 12 2·0	1 21 59·5	·95
6	5 11 48·25	21 45 56·5	·0013955	0 14·4	79 14 16·7	1 21 54·6	·95
7	5 12 21·74	21 46 40·1	·0014384	0 11·1	79 16 31·3	1 21 49·7	·95
8	5 12 55·26	21 47 23·1	·0014710	0 7·7	79 18 46·0	1 21 44·8	·95
9	5 13 28·80	21 48 5·6	·0014933	0 4·3	79 21 0·6	1 21 39·9	·95
10	5 14 2·36	21 48 47·6	·0015052	{0 0·3 / 57 0·8}	79 23 15·3	1 21 35·0	·95
11	5 14 35·92	21 49 29·1	·0015067	23 54·2	79 25 30·0	1 21 30·1	·95
12	5 15 9·49	21 50 10·0	·0014979	23 50·8	79 27 44·6	1 21 25·2	·95
13	5 15 43·07	21 50 50·3	·0014787	23 47·4	79 29 59·3	1 21 20·3	·95
14	5 16 16·63	21 51 30·1	·0014491	23 44·1	79 32 14·0	1 21 15·4	·95
15	5 16 50·18	21 52 9·3	·0014091	23 40·7	79 34 28·7	1 21 10·5	·95
16	5 17 23·72	21 52 47·9	·0013587	23 37·3	79 36 43·3	1 21 5·6	·95
17	5 17 57·24	21 53 26·0	·0012979	23 33·9	79 38 58·0	1 21 0·7	·95
18	5 18 30·74	21 54 3·5	·0012269	23 30·5	79 41 12·7	1 20 55·7	·95
19	5 19 4·20	21 54 40·4	·0011455	23 27·2	79 43 27·4	1 20 50·8	·95
20	5 19 37·63	21 55 16·7	·0010538	23 23·8	79 45 42·1	1 20 45·9	·95
21	5 20 11·02	21 55 52·4	·0009519	23 20·4	79 47 56·7	1 20 41·0	·95
22	5 20 44·37	21 56 27·6	·0008397	23 17·0	79 50 11·4	1 20 36·0	·95
23	5 21 17·67	21 57 2·1	·0007174	23 13·7	79 52 26·1	1 20 31·1	·95
24	5 21 50·92	21 57 36·1	·0005848	23 10·3	79 54 40·8	1 20 26·2	·95
25	5 22 24·10	21 58 9·4	·0004421	23 6·9	79 56 55·5	1 20 21·2	·95
26	5 22 57·23	21 58 42·2	·0002893	23 3·5	79 59 10·2	1 20 16·3	·95
27	5 23 30·29	21 59 14·4	1·0001264	23 0·1	80 1 24·9	1 20 11·4	·95
28	5 24 3·28	21 59 45·9	0·9999534	22 56·7	80 3 39·6	1 20 6·4	·95
29	5 24 36·19	22 0 16·9	·9997703	22 53·4	80 5 54·3	1 20 1·5	·95
30	5 25 9·03	22 0 47·3	·9995773	22 50·0	80 8 9·0	1 19 56·5	·95
31	5 25 41·78	N.22 1 17·1	0·9993742	22 46·6	80 10 23·7	S.1 19 51·6	0·95

JUNE, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
5 9 2·00	+ 1·38	0·58	N.21 42 11·9	+ 1·9	7·5	0·9
5 9 35·24	1·39	0·58	21 42 57·9	1·9	7·5	0·9
5 10 8·52	1·39	0·58	21 43 43·4	1·9	7·5	0·9
5 10 41·84	1·39	0·58	21 44 28·4	1·9	7·5	0·9
5 11 15·20	1·39	0·58	21 45 12·9	1·8	7·5	0·9
5 11 48·58	1·39	0·58	21 45 56·9	1·8	7·5	0·9
5 12 22·00	1·39	0·58	21 46 40·4	1·8	7·5	0·9
5 12 55·44	1·39	0·58	21 47 23·3	1·8	7·5	0·9
5 13 28·90	1·39	0·58	21 48 5·8	1·8	7·5	0·9
5 15 9·36	1·40	0·58	21 50 9·8	1·7	7·5	0·9
5 15 42·85	1·40	0·58	21 50 50·1	1·7	7·5	0·9
5 16 16·34	1·40	0·58	21 51 29·8	1·6	7·5	0·9
5 16 49·81	1·39	0·58	21 52 8·9	1·6	7·5	0·9
5 17 23·27	1·39	0·58	21 52 47·4	1·6	7·5	0·9
5 17 56·71	1·39	0·58	21 53 25·4	1·6	7·5	0·9
5 18 30·13	1·39	0·58	21 54 2·8	1·5	7·5	0·9
5 19 3·52	1·39	0·58	21 54 39·6	1·5	7·5	0·9
5 19 36·87	1·39	0·58	21 55 15·9	1·5	7·5	0·9
5 20 10·18	1·39	0·58	21 55 51·5	1·5	7·5	0·9
5 20 43·46	1·39	0·58	21 56 26·6	1·5	7·5	0·9
5 21 16·68	1·38	0·58	21 57 1·1	1·4	7·5	0·9
5 21 49·85	1·38	0·58	21 57 35·0	1·4	7·5	0·9
5 22 22·96	1·38	0·58	21 58 8·3	1·4	7·5	0·9
5 22 56·01	1·38	0·58	21 58 41·0	1	5	0·9
5 23 28·99	1·37	0·58	21 59 13·1			0·9
5 24 1·91	1·37	0·58	21 59 44·6			0·
5 24 34·75	1·37	0·58	22 0 15·6			0
5 25 7·51	1·36	0·58	22 0 45·0			
5 25 40·19	1·36	0·58	22 1 15			
5 26 12·78	+ 1·36	0·58	N.22 1 44			

JULY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*No*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 25 41·78	N.22 1 17·1	0·9993742	22 46·6	80 10 23·7	S. 1 19 51·6	0·955
2	5 26 14·44	22 1 46·3	·9991611	22 43·2	80 12 38·4	1 19 46·6	·955
3	5 26 47·02	22 2 14·9	·9989381	22 39·8	80 14 53·1	1 19 41·7	·955
4	5 27 19·50	22 2 42·9	·9987051	22 36·4	80 17 7·8	1 19 36·7	·955
5	5 27 51·88	22 3 10·4	·9984622	22 33·0	80 19 22·5	1 19 31·8	·955
6	5 28 24·16	22 3 37·2	·9982093	22 29·6	80 21 37·2	1 19 26·8	·955
7	5 28 56·33	22 4 3·4	·9979466	22 26·2	80 23 51·9	1 19 21·9	·955
8	5 29 28·39	22 4 29·1	·9976740	22 22·8	80 26 6·6	1 19 16·9	·955
9	5 30 0·33	22 4 54·2	·9973915	22 19·4	80 28 21·3	1 19 12·0	·955
10	5 30 32·15	22 5 18·7	·9970991	22 16·0	80 30 36·0	1 19 7·0	·955
11	5 31 3·84	22 5 42·5	·9967968	22 12·6	80 32 50·7	1 19 2·0	·955
12	5 31 35·40	22 6 5·8	·9964848	22 9·2	80 35 5·5	1 18 57·1	·955
13	5 32 6·82	22 6 28·6	·9961630	22 5·7	80 37 20·2	1 18 52·1	·955
14	5 32 38·09	22 6 50·7	·9958315	22 2·3	80 39 34·9	1 18 47·1	·955
15	5 33 9·22	22 7 12·2	·9954903	21 58·9	80 41 49·6	1 18 42·1	·955
16	5 33 40·19	22 7 33·2	·9951394	21 55·5	80 44 4·3	1 18 37·2	·955
17	5 34 11·00	22 7 53·6	·9947789	21 52·1	80 46 19·0	1 18 32·2	·955
18	5 34 41·65	22 8 13·4	·9944090	21 48·6	80 48 33·7	1 18 27·2	·955
19	5 35 12·13	22 8 32·6	·9940296	21 45·2	80 50 48·5	1 18 22·2	·955
20	5 35 42·43	22 8 51·3	·9936409	21 41·8	80 53 3·2	1 18 17·2	·955
21	5 36 12·55	22 9 9·4	·9932429	21 38·3	80 55 17·9	1 18 12·2	·955
22	5 36 42·50	22 9 27·0	·9928356	21 34·9	80 57 32·6	1 18 7·3	·955
23	5 37 12·25	22 9 44·0	·9924192	21 31·5	80 59 47·3	1 18 2·3	·955
24	5 37 41·81	22 10 0·5	·9919937	21 28·0	81 2 2·1	1 17 57·3	·955
25	5 38 11·18	22 10 16·5	·9915590	21 24·6	81 4 16·8	1 17 52·3	·955
26	5 38 40·35	22 10 31·9	·9911154	21 21·1	81 6 31·5	1 17 47·3	·955
27	5 39 9·32	22 10 46·8	·9906628	21 17·7	81 8 46·2	1 17 42·3	·955
28	5 39 38·08	22 11 1·1	·9902014	21 14·2	81 11 0·9	1 17 37·3	·955
29	5 40 6·63	22 11 15·0	·9897311	21 10·8	81 13 15·7	1 17 32·3	·955
30	5 40 34·96	22 11 28·3	·9892520	21 7·3	81 15 30·4	1 17 27·3	·955
31	5 41 3·07	22 11 41·2	·9887642	21 3·8	81 17 45·1	1 17 22·3	·955
32	5 41 30·95	N.22 11 53·5	0·9882677	21 0·4	81 19 59·8	S. 1 17 17·3	0·955

JULY, 1855

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
5 26 12·78	+ 1·36	0·58	N.22 1 44·8	+ 1·2	7·5	0·9
5 26 45·28	1·35	0·58	22 2 13·4	1·2	7·5	0·9
5 27 17·69	1·35	0·58	22 2 41·4	1·2	7·5	0·9
5 27 50·00	1·34	0·58	22 3 8·8	1·1	7·5	0·9
5 28 22·21	1·34	0·58	22 3 35·6	1·1	7·5	0·9
5 28 54·31	1·34	0·58	22 4 1·8	1·1	7·5	0·9
5 29 26·31	1·33	0·58	22 4 27·5	1·1	7·6	0·9
5 29 58·18	1·33	0·58	22 4 52·5	1·0	7·6	0·9
5 30 29·93	1·32	0·58	22 5 17·0	1·0	7·6	0·9
5 31 1·55	1·32	0·58	22 5 40·8	1·0	7·6	0·9
5 31 33·05	1·31	0·58	22 6 4·1	1·0	7·6	0·9
5 32 4·40	1·30	0·58	22 6 26·8	0·9	7·6	0·9
5 32 35·61	1·30	0·58	22 6 49·0	0·9	7·6	0·9
5 33 6·68	1·29	0·58	22 7 10·5	0·9	7·6	0·9
5 33 37·59	1·28	0·58	22 7 31·5	0·9	7·6	0·9
5 34 8·34	1·28	0·58	22 7 51·8	0·8	7·6	0·9
5 34 38·93	1·27	0·58	22 8 11·6	0·8	7·6	0·9
5 35 9·36	1·26	0·58	22 8 30·9	0·8	7·6	0·9
5 35 39·60	1·26	0·58	22 8 49·6	0·8	7·6	0·9
5 36 9·67	1·25	0·58	22 9 7·7	0·7	7·6	0·9
5 36 39·56	1·24	0·58	22 9 25·3	0·7	7·6	0·9
5 37 9·26	1·23	0·58	22 9 42·3	0·7	7·6	0·9
5 37 38·77	1·23	0·59	22 9 58·8	0·7	7·7	0·9
5 38 8·09	1·22	0·59	22 10 14·8	0·7	7·7	0·9
5 38 37·21	1·21	0·59	22 10 30·3	0·6	7·7	0·9
5 39 6·13	1·20	0·59	22 10 45·2	0·6	7·7	0·9
5 39 34·84	1·19	0·59	22 10 59·6		7·7	0·9
5 40 3·35	1·18	0·59	22 11		7·7	
5 40 31·64	1·17	0·59	22 11		7·7	
5 40 59·71	1·16	0·59	22 11		7·7	
5 41 27·55	1·16	0·59	22 11		·7	
5 41 55·17	+ 1·15	0·59	N.22 12		7	

AUGUST, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 41 30·95	N.22 11 53·5	0·9882677	21 0·4	81 19 59·8	S.1 17 17·3	0·9550
2	5 41 58·61	22 12 5·4	·9877627	20 56·9	81 22 14·5	1 17 12·3	·9550
3	5 42 26·03	22 12 16·8	·9872491	20 53·4	81 24 29·3	1 17 7·3	·9550
4	5 42 53·21	22 12 27·7	·9867270	20 49·9	81 26 44·0	1 17 2·2	·9550
5	5 43 20·14	22 12 38·2	·9861964	20 46·4	81 28 58·7	1 16 57·2	·9550
6	5 43 46·83	22 12 48·2	·9856576	20 42·9	81 31 13·4	1 16 52·2	·9550
7	5 44 13·26	22 12 57·7	·9851104	20 39·4	81 33 28·1	1 16 47·2	·9550
8	5 44 39·44	22 13 6·8	·9845550	20 35·9	81 35 42·9	1 16 42·2	·9550
9	5 45 5·35	22 13 15·4	·9839914	20 32·4	81 37 57·6	1 16 37·1	·9550
10	5 45 30·99	22 13 23·6	·9834198	20 28·9	81 40 12·3	1 16 32·1	·9550
11	5 45 56·35	22 13 31·4	·9828402	20 25·4	81 42 27·0	1 16 27·1	·9550
12	5 46 21·43	22 13 38·7	·9822527	20 21·9	81 44 41·8	1 16 22·1	·9550
13	5 46 46·23	22 13 45·6	·9816575	20 18·3	81 46 56·5	1 16 17·0	·9550
14	5 47 10·73	22 13 52·1	·9810546	20 14·8	81 49 11·2	1 16 12·0	·9550
15	5 47 34·94	22 13 58·2	·9804441	20 11·3	81 51 25·9	1 16 7·0	·9550
16	5 47 58·85	22 14 3·9	·9798262	20 7·7	81 53 40·7	1 16 1·9	·9550
17	5 48 22·46	22 14 9·3	·9792009	20 4·2	81 55 55·4	1 15 56·9	·9550
18	5 48 45·75	22 14 14·2	·9785684	20 0·6	81 58 10·1	1 15 51·8	·9550
19	5 49 8·74	22 14 18·8	·9779289	19 57·1	82 0 24·8	1 15 46·8	·9550
20	5 49 31·41	22 14 23·0	·9772824	19 53·5	82 2 39·6	1 15 41·8	·9550
21	5 49 53·76	22 14 26·9	·9766290	19 50·0	82 4 54·3	1 15 36·7	·9550
22	5 50 15·78	22 14 30·5	·9759690	19 46·4	82 7 9·0	1 15 31·7	·9550
23	5 50 37·48	22 14 33·7	·9753023	19 42·8	82 9 23·7	1 15 26·6	·9550
24	5 50 58·83	22 14 36·6	·9746292	19 39·2	82 11 38·5	1 15 21·6	·9549
25	5 51 19·85	22 14 39·2	·9739497	19 35·6	82 13 53·2	1 15 16·5	·9549
26	5 51 40·52	22 14 41·5	·9732641	19 32·1	82 16 7·9	1 15 11·4	·9549
27	5 52 0·85	22 14 43·5	·9725723	19 28·5	82 18 22·6	1 15 6·4	·9549
28	5 52 20·82	22 14 45·2	·9718745	19 24·8	82 20 37·3	1 15 1·3	·9549
29	5 52 40·44	22 14 46·7	·9711709	19 21·2	82 22 52·1	1 14 56·3	·9549
30	5 52 59·71	22 14 47·9	·9704614	19 17·6	82 25 6·8	1 14 51·2	·9549
31	5 53 18·60	22 14 48·8	·9697462	19 14·0	82 27 21·5	1 14 46·1	·9549
32	5 53 37·13	N.22 14 49·5	0·9690254	19 10·3	82 29 36·2	S.1 14 41·1	0·9549

AUGUST, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
5 41 55·17	+ 1·15	0·59	N.22 12 3·9	+ 0·5	7·7	0·9
5 42 22·55	1·14	0·59	22 12 15·4	0·5	7·7	0·9
5 42 49·70	1·13	0·60	22 12 26·3	0·4	7·8	0·9
5 43 16·60	1·12	0·60	22 12 36·8	0·4	7·8	0·9
5 43 43·26	1·11	0·60	22 12 46·8	0·4	7·8	0·9
5 44 9·66	1·09	0·60	22 12 56·4	0·4	7·8	0·9
5 44 35·81	1·08	0·60	22 13 5·5	0·4	7·8	0·9
5 45 1·69	1·07	0·60	22 13 14·2	0·4	7·8	0·9
5 45 27·30	1·06	0·60	22 13 22·4	0·3	7·8	0·9
5 45 52·64	1·05	0·60	22 13 30·2	0·3	7·8	0·9
5 46 17·71	1·04	0·60	22 13 37·6	0·3	7·8	0·9
5 46 42·49	1·03	0·61	22 13 44·6	0·3	7·9	0·9
5 47 6·98	1·01	0·61	22 13 51·1	0·3	7·9	0·9
5 47 31·18	1·00	0·61	22 13 57·3	0·2	7·9	0·9
5 47 55·08	0·99	0·61	22 14 3·0	0·2	7·9	0·9
5 48 18·68	0·98	0·61	22 14 8·4	0·2	7·9	0·9
5 48 41·96	0·96	0·61	22 14 13·4	0·2	7·9	0·9
5 49 4·94	0·95	0·61	22 14 18·1	0·2	7·9	0·9
5 49 27·61	0·94	0·61	22 14 22·3	0·2	7·9	0·9
5 49 49·96	0·92	0·61	22 14 26·3	0·2	8·0	0·9
5 50 11·98	0·91	0·61	22 14 29·9	0·1	8·0	0·9
5 50 33·68	0·90	0·61	22 14 33·2	0·1	8·0	0·9
5 50 55·04	0·88	0·61	22 14 36·1	0·1	8·0	0·9
5 51 16·07	0·87	0·61	22 14 38·8	0·1	8·0	0·9
5 51 36·75	0·85	0·61	22 14 41·1	0·1	8·0	0·9
5 51 57·09	0·84	0·61	22 14 43·2	0·1	8·0	
5 52 17·08	0·83	0·62	22 14 44·9	0·1	8·1	
5 52 36·72	0·81	0·62	22 14 46·4	+ 0·1	8	
5 52 56·00	0·80	0·62	22 14 47·7	0·0		
5 53 14·92	0·78	0·62	22 14 48·6	0·0		
5 53 33·48	0·77	0·62	22 14 49·3	0·0		
5 53 51·67	+ 0·75	0·62	N.22 14 49·8	0·0		

SEPTEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*N*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 53 37·13	N. 22 14 49·5	0·9690254	19 10·3	82 29 36·2	S. 1 14 41·1	0·95
2	5 53 55·29	22 14 49·9	·9682991	19 6·7	82 31 50·9	1 14 36·0	·95
3	5 54 13·08	22 14 50·1	·9675676	19 3·1	82 34 5·7	1 14 30·9	·95
4	5 54 30·48	22 14 50·0	·9668309	18 59·4	82 36 20·4	1 14 25·8	·95
5	5 54 47·50	22 14 49·8	·9660892	18 55·8	82 38 35·1	1 14 20·8	·95
6	5 55 4·13	22 14 49·3	·9653427	18 52·1	82 40 49·8	1 14 15·7	·95
7	5 55 20·36	22 14 48·6	·9645915	18 48·5	82 43 4·6	1 14 10·6	·95
8	5 55 36·19	22 14 47·8	·9638359	18 44·8	82 45 19·3	1 14 5·5	·95
9	5 55 51·62	22 14 46·8	·9630759	18 41·1	82 47 34·0	1 14 0·4	·95
10	5 56 6·64	22 14 45·6	·9623118	18 37·4	82 49 48·7	1 13 55·3	·95
11	5 56 21·25	22 14 44·2	·9615437	18 33·7	82 52 3·5	1 13 50·2	·95
12	5 56 35·44	22 14 42·7	·9607718	18 30·0	82 54 18·2	1 13 45·2	·95
13	5 56 49·21	22 14 41·1	·9599963	18 26·3	82 56 32·9	1 13 40·1	·95
14	5 57 2·56	22 14 39·3	·9592173	18 22·6	82 58 47·6	1 13 35·0	·95
15	5 57 15·48	22 14 37·4	·9584352	18 18·9	83 1 2·4	1 13 29·9	·95
16	5 57 27·96	22 14 35·4	·9576501	18 15·1	83 3 17·1	1 13 24·8	·95
17	5 57 40·02	22 14 33·2	·9568621	18 11·4	83 5 31·8	1 13 19·7	·95
18	5 57 51·64	22 14 31·0	·9560716	18 7·6	83 7 46·6	1 13 14·6	·95
19	5 58 2·82	22 14 28·6	·9552787	18 3·9	83 10 1·3	1 13 9·5	·95
20	5 58 13·55	22 14 26·2	·9544836	18 0·1	83 12 16·0	1 13 4·3	·95
21	5 58 23·85	22 14 23·7	·9536866	17 56·4	83 14 30·8	1 12 59·2	·95
22	5 58 33·69	22 14 21·1	·9528877	17 52·6	83 16 45·5	1 12 54·1	·95
23	5 58 43·09	22 14 18·4	·9520872	17 48·8	83 19 0·3	1 12 49·0	·95
24	5 58 52·03	22 14 15·7	·9512853	17 45·0	83 21 15·0	1 12 43·9	·95
25	5 59 0·52	22 14 13·0	·9504822	17 41·2	83 23 29·7	1 12 38·8	·95
26	5 59 8·56	22 14 10·2	·9496781	17 37·4	83 25 44·5	1 12 33·7	·95
27	5 59 16·14	22 14 7·4	·9488732	17 33·6	83 27 59·2	1 12 28·5	·95
28	5 59 23·25	22 14 4·6	·9480678	17 29·8	83 30 14·0	1 12 23·4	·95
29	5 59 29·90	22 14 1·8	·9472619	17 26·0	83 32 28·7	1 12 18·3	·95
30	5 59 36·09	22 13 58·9	·9464559	17 22·1	83 34 43·5	1 12 13·2	·95
31	5 59 41·81	N. 22 13 56·0	0·9456499	17 18·3	83 36 58·3	S. 1 12 8·0	0·95

SEPTEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
5 53 51·67	+ 0·75	0·62	N.22 14 49·8	0·0	8·1	0·9
5 54 9·49	0·73	0·62	22 14 50·0	0·0	8·1	0·9
5 54 26·93	0·72	0·62	22 14 50·0	0·0	8·2	0·9
5 54 43·98	0·70	0·62	22 14 49·8	0·0	8·2	0·9
5 55 0·65	0·69	0·62	22 14 49·4	0·0	8·2	0·9
5 55 16·92	0·67	0·62	22 14 48·8	0·0	8·2	0·9
5 55 32·80	0·65	0·62	22 14 48·0	0·0	8·2	0·9
5 55 48·28	0·64	0·62	22 14 47·0	0·0	8·2	0·9
5 56 3·35	0·62	0·62	22 14 45·8	— 0·1	8·2	0·9
5 56 18·01	0·60	0·63	22 14 44·5	0·1	8·3	0·9
5 56 32·26	0·58	0·63	22 14 43·1	0·1	8·3	0·9
5 56 46·09	0·57	0·63	22 14 41·5	0·1	8·3	0·9
5 56 59·50	0·55	0·63	22 14 39·7	0·1	8·3	0·9
5 57 12·49	0·53	0·63	22 14 37·9	0·1	8·3	0·9
5 57 25·05	0·51	0·63	22 14 35·9	0·1	8·3	0·9
5 57 37·18	0·50	0·64	22 14 33·8	0·1	8·3	0·9
5 57 48·87	0·48	0·64	22 14 31·6	0·1	8·3	0·9
5 58 0·12	0·46	0·64	22 14 29·3	0·1	8·3	1·0
5 58 10·94	0·44	0·64	22 14 26·8	0·1	8·3	1·0
5 58 21·32	0·42	0·64	22 14 24·3	0·1	8·3	1·0
5 58 31·25	0·40	0·64	22 14 21·7	0·1	8·3	1·0
5 58 40·73	0·39	0·65	22 14 19·1	0·1	8·4	1·0
5 58 49·77	0·37	0·65	22 14 16·4	0·1	8·4	1·0
5 58 58·36	0·35	0·65	22 14 13·7	0·1	8·4	1·0
5 59 6·49	0·33	0·65	22 14 11·0	0·1	8·4	1·0
5 59 14·17	0·31	0·65	22 14 8·2	0·1	8·4	
5 59 21·39	0·29	0·65	22 14 5·4	0·1	8·4	
5 59 28·15	0·27	0·65	22 14 2·5	0·1	0	
5 59 34·45	0·25	0·65	22 13 59·7	0·1		
5 59 40·27	0·23	0·65	22 13 56·8	0·1		
5 59 45·63	+ 0·21	0·65	N.22 13 53·9	— 0·1		

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 59 41·81	N.22 13 56·0	0·9456499	17 18·3	83 36 58·3	S.1 12 8·0	0·9549
2	5 59 47·05	22 13 53·2	·9448442	17 14·4	83 39 13·0	1 12 2·9	·9549
3	5 59 51·82	22 13 50·3	·9440391	17 10·6	83 41 27·8	1 11 57·8	·9549
4	5 59 56·11	22 13 47·4	·9432347	17 6·7	83 43 42·5	1 11 52·6	·9549
5	5 59 59·93	22 13 44·5	·9424313	17 2·8	83 45 57·3	1 11 47·5	·9549
6	6 0 3·27	22 13 41·6	·9416292	16 59·0	83 48 12·1	1 11 42·3	·9549
7	6 0 6·13	22 13 38·7	·9408285	16 55·1	83 50 26·8	1 11 37·2	·9549
8	6 0 8·50	22 13 35·8	·9400297	16 51·2	83 52 41·6	1 11 32·1	·9549
9	6 0 10·39	22 13 33·0	·9392329	16 47·3	83 54 56·4	1 11 26·9	·9549
10	6 0 11·79	22 13 30·1	·9384385	16 43·4	83 57 11·1	1 11 21·8	·9549
11	6 0 12·71	22 13 27·4	·9376468	16 39·4	83 59 25·9	1 11 16·6	·9549
12	6 0 13·15	22 13 24·6	·9368579	16 35·5	84 1 40·7	1 11 11·5	·9549
13	6 0 13·10	22 13 21·9	·9360723	16 31·6	84 3 55·5	1 11 6·3	·9549
14	6 0 12·56	22 13 19·3	·9352902	16 27·6	84 6 10·2	1 11 1·2	·9549
15	6 0 11·54	22 13 16·7	·9345119	16 23·7	84 8 25·0	1 10 56·0	·9549
16	6 0 10·03	22 13 14·2	·9337376	16 19·7	84 10 39·8	1 10 50·8	·9549
17	6 0 8·04	22 13 11·7	·9329676	16 15·7	84 12 54·6	1 10 45·7	·9549
18	6 0 5·57	22 13 9·3	·9322022	16 11·8	84 15 9·4	1 10 40·5	·9549
19	6 0 2·62	22 13 6·9	·9314416	16 7·8	84 17 24·1	1 10 35·4	·9549
20	5 59 59·20	22 13 4·6	·9306862	16 3·8	84 19 38·9	1 10 30·2	·9549
21	5 59 55·29	22 13 2·3	·9299361	15 59·8	84 21 53·7	1 10 25·0	·9548
22	5 59 50·92	22 13 0·1	·9291917	15 55·8	84 24 8·5	1 10 19·8	·9548
23	5 59 46·07	22 12 58·0	·9284532	15 51·7	84 26 23·3	1 10 14·7	·9548
24	5 59 40·75	22 12 55·9	·9277209	15 47·7	84 28 38·1	1 10 9·5	·9548
25	5 59 34·97	22 12 53·9	·9269950	15 43·7	84 30 52·9	1 10 4·3	·9548
26	5 59 28·72	22 12 51·9	·9262759	15 39·7	84 33 7·7	1 9 59·1	·9548
27	5 59 22·01	22 12 50·1	·9255637	15 35·6	84 35 22·5	1 9 54·0	·9548
28	5 59 14·83	22 12 48·2	·9248588	15 31·6	84 37 37·3	1 9 48·8	·9548
29	5 59 7·20	22 12 46·4	·9241614	15 27·5	84 39 52·1	1 9 43·6	·9548
30	5 58 59·11	22 12 44·7	·9234719	15 23·4	84 42 6·9	1 9 38·4	·9548
31	5 58 50·57	22 12 43·0	·9227904	15 19·3	84 44 21·7	1 9 33·2	·9548
32	5 58 41·58	N.22 12 41·4	0·9221172	15 15·3	84 46 36·6	S.1 9 28·0	0·9548

OCTOBER, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	5 59 45·63	+ 0·21	0·65	N.22 13 53·9	— 0·1	8·5	1·0
2	5 59 50·52	0·19	0·65	22 13 51·1	0·1	8·5	1·0
3	5 59 54·94	0·17	0·65	22 13 48·2	0·1	8·5	1·0
4	5 59 58·88	0·15	0·66	22 13 45·3	0·1	8·6	1·0
5	6 0 2·35	0·13	0·66	22 13 42·4	0·1	8·6	1·0
6	6 0 5·34	0·11	0·66	22 13 39·6	0·1	8·6	1·0
7	6 0 7·85	0·09	0·66	22 13 36·7	0·1	8·6	1·0
8	6 0 9·88	0·07	0·66	22 13 33·8	0·1	8·6	1·0
9	6 0 11·42	0·05	0·66	22 13 31·0	0·1	8·6	1·0
10	6 0 12·49	0·03	0·67	22 13 28·2	0·1	8·7	1·0
11	6 0 13·07	+ 0·01	0·67	22 13 25·4	0·1	8·7	1·0
12	6 0 13·16	— 0·01	0·67	22 13 22·7	0·1	8·7	1·0
13	6 0 12·78	0·03	0·67	22 13 20·1	0·1	8·7	1·0
14	6 0 11·91	0·05	0·67	22 13 17·5	0·1	8·7	1·0
15	6 0 10·56	0·07	0·67	22 13 15·0	0·1	8·7	1·0
16	6 0 8·73	0·09	0·68	22 13 12·5	0·1	8·8	1·0
17	6 0 6·42	0·11	0·68	22 13 10·1	0·1	8·8	1·0
18	6 0 3·63	0·13	0·68	22 13 7·7	0·1	8·8	1·0
19	6 0 0·37	0·15	0·68	22 13 5·3	0·1	8·8	1·0
20	5 59 56·63	0·17	0·68	22 13 3·1	0·1	8·8	1·0
21	5 59 52·43	0·19	0·68	22 13 0·9	0·1	8·8	1·0
22	5 59 47·75	0·20	0·68	22 12 58·7	0·1	8·9	1·0
23	5 59 42·61	0·22	0·68	22 12 56·6	0·1	8·9	1·0
24	5 59 37·00	0·24	0·68	22 12 54·6	0·1	8·9	1·0
25	5 59 30·93	0·26	0·68	22 12 52·6	0·1	8·9	1·0
26	5 59 24·39	0·28	0·68	22 12 50·7	0·1	8·9	1·
27	5 59 17·40	0·30	0·68	22 12 48·9	0·1	8·9	1
28	5 59 9·95	0·32	0·69	22 12 47·1	0·1	9·0	
29	5 59 2·04	0·34	0·69	22 12 45·3	0·1	9·0	
30	5 58 53·69	0·36	0·69	22 12 43·6	0·1	9·0	
31	5 58 44·88	0·38	0·69	22 12 42·0	0·1	9·0	
32	5 58 35·63	— 0·39	0·69	N.22 12 40·3	— 0·1	9·0	

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric. Apparent Right Ascension. Noon.	Apparent Declination. Noon.	Log. of True Dist. from the Earth. Noon.	Meridi… Pas…			
	h m s	° ′ ″				° ′ ″	
1	5 59 41·81	N.22 13 56·0	0·94568			84 46 36·6	S.
2	5 59 47·05	22 13 53·2	·9448		2	84 48 51·4	
3	5 59 51·82	22 13 50·3	·94		7·1	84 51 6·2	
4	5 59 56·11	22 13 47·4		11	15 3·0	84 53 21·0	
5	5 59 59·93	22 13 44·5		95145	14 58·8	84 55 35·8	
6	6 0 3·27	22 13 41·		9188878	14 54·7	84 57 50·7	
7	6 0 6·13	22 13		·9182712	14 50·6	85 0 5·5	
8	6 0 8·50	22	20 12 32·4	·9176651	14 46·4	85 2 20·3	
9	6 0 10·39	22	20 12 31·0 20 12 29·7	·9170697	14 42·3	85 4 35·2	
10	6 0 11·79		22 12 28·5	·9164854	14 38·1	85 6 50·0	
11	6 0 12·71		22 12 27·2	·9159123	14 34·0	85 9 4·8	
12	6 0 13·1		22 12 26·0	·9153508	14 29·8	85 11 19·7	
13	6 0 1		22 12 24·8	·9148012	14 25·7	85 13 34·5	
14	6 0		22 12 23·6	·9142636	14 21·5	85 15 49·3	
15	6		22 12 22·5	·9137384	14 17·3	85 18 4·2	
16			22 12 21·3	·9132257	14 13·1	85 20 19·0	
17			22 12 20·2	·9127259	14 8·9	85 22 33·9	
18			22 12 19·1	·9122392	14 4·8	85 24 48·7	
19	5 54 48·66		22 12 17·9	·9117658	14 0·6	85 27 3·6	
20	5 54 32·20		22 12 16·8	·9113058	13 56·3	85 29 18·4	
21	5 54 15·42		22 12 15·7	·9108596	13 52·1	85 31 33·3	
22	5 53 58·33		22 12 14·5	·9104272	13 47·9	85 33 48·1	
23	5 53 40·94		22 12 13·4	·9100090	13 43·7	85 36 3·0	
24	5 53 23·26		22 12 12·3	·9096050	13 39·5	85 38 17·9	
25	5 53 5·30		22 12 11·1	·9092155	13 35·2	85 40 32·7	
26	5 52 47·07		22 12 10·0	·9088408	13 31·0	85 42 47·6	
27	5 52 28·57		22 12 8·8	·9084809	13 26·8	85 45 2·5	
28	5 52 9·82		22 12 7·6	·9081361	13 22·5	85 47 17·4	
29	5 51 50·83		22 12 6·4	·9078065	13 18·3	85 49 32·2	
30	5 51 31·60		22 12 5·1	·9074924	13 14·0	85 51 47·1	
31	5 51 12·14	N.22 12 3·8	0·9071939	13 9·8		85 54 2·0	S.

NOVEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 58 41·58	N.22 12 41·4	0·9221172	15 15·3	84 46 36·6	S. 1 9 28·0	0·954
2	5 58 32·14	22 12 39·8	·9214528	15 11·2	84 48 51·4	1 9 22·8	·954
3	5 58 22·27	22 12 38·2	·9207973	15 7·1	84 51 6·2	1 9 17·6	·954
4	5 58 11·95	22 12 36·7	·9201511	15 3·0	84 53 21·0	1 9 12·4	·954
5	5 58 1·21	22 12 35·2	·9195145	14 58·8	84 55 35·8	1 9 7·2	·954
6	5 57 50·03	22 12 33·8	·9188878	14 54·7	84 57 50·7	1 9 2·0	·954
7	5 57 38·44	22 12 32·4	·9182712	14 50·6	85 0 5·5	1 8 56·8	·954
8	5 57 26·42	22 12 31·0	·9176651	14 46·4	85 2 20·3	1 8 51·6	·954
9	5 57 13·99	22 12 29·7	·9170697	14 42·3	85 4 35·2	1 8 46·4	·954
10	5 57 1·16	22 12 28·5	·9164854	14 38·1	85 6 50·0	1 8 41·2	·954
11	5 56 47·93	22 12 27·2	·9159123	14 34·0	85 9 4·8	1 8 36·0	·954
12	5 56 34·31	22 12 26·0	·9153508	14 29·8	85 11 19·7	1 8 30·8	·954
13	5 56 20·30	22 12 24·8	·9148012	14 25·7	85 13 34·5	1 8 25·6	·954
14	5 56 5·92	22 12 23·6	·9142636	14 21·5	85 15 49·3	1 8 20·4	·954
15	5 55 51·17	22 12 22·5	·9137384	14 17·3	85 18 4·2	1 8 15·2	·954
16	5 55 36·06	22 12 21·3	·9132257	14 13·1	85 20 19·0	1 8 10·0	·954
17	5 55 20·60	22 12 20·2	·9127259	14 8·9	85 22 33·9	1 8 4·7	·954
18	5 55 4·80	22 12 19·1	·9122392	14 4·8	85 24 48·7	1 7 59·5	·954
19	5 54 48·66	22 12 17·9	·9117658	14 0·6	85 27 3·6	1 7 54·3	·954
20	5 54 32·20	22 12 16·8	·9113058	13 56·3	85 29 18·4	1 7 49·1	·954
21	5 54 15·42	22 12 15·7	·9108596	13 52·1	85 31 33·3	1 7 43·9	·954
22	5 53 58·33	22 12 14·5	·9104272	13 47·9	85 33 48·1	1 7 38·6	·954
23	5 53 40·94	22 12 13·4	·9100090	13 43·7	85 36 3·0	1 7 33·4	·954
24	5 53 23·26	22 12 12·3	·9096050	13 39·5	85 38 17·9	1 7 28·2	·954
25	5 53 5·30	22 12 11·1	·9092155	13 35·2	85 40 32·7	1 7 22·9	·954
26	5 52 47·07	22 12 10·0	·9088408	13 31·0	85 42 47·6	1 7 17·7	·954
27	5 52 28·57	22 12 8·8	·9084809	13 26·8	85 45 2·5	1 7 12·5	·954
28	5 52 9·82	22 12 7·6	·9081361	13 22·5	85 47 17·4	1 7 7·2	·954
29	5 51 50·83	22 12 6·4	·9078065	13 18·3	85 49 32·2	1 7 2·0	·954
30	5 51 31·60	22 12 5·1	·9074924	13 14·0	85 51 47·1	1 6 56·8	·954
31	5 51 12·14	N.22 12 3·8	0·9071939	13 9·8	85 54 2·0	S. 1 6 51·5	0·954

NOVEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	5 58 35·63	— 0·39	0·69	N.22 12 40·3	— 0·1	9·0	1·0
2	5 58 25·94	0·41	0·69	22 12 38·8	0·1	9·0	1·0
3	5 58 15·82	0·43	0·69	22 12 37·3	0·1	9·0	1·0
4	5 58 5·27	0·45	0·69	22 12 35·8	0·1	9·1	1·0
5	5 57 54·28	0·47	0·69	22 12 34·3	0·1	9·1	1·0
6	5 57 42·87	0·48	0·69	22 12 32·9	0·1	9·1	1·0
7	5 57 31·05	0·50	0·69	22 12 31·6	0·1	9·1	1·0
8	5 57 18·82	0·52	0·69	22 12 30·2	0·1	9·1	1·0
9	5 57 6·18	0·53	0·69	22 12 28·9	0·1	9·1	1·0
10	5 56 53·14	0·55	0·69	22 12 27·7	0·1	9·1	1·0
11	5 56 39·71	0·57	0·70	22 12 26·4	0·1	9·2	1·0
12	5 56 25·89	0·58	0·70	22 12 25·2	0·0	9·2	1·0
13	5 56 11·70	0·60	0·70	22 12 24·1	0·0	9·2	1·0
14	5 55 57·14	0·61	0·70	22 12 22·9	0·0	9·2	1·0
15	5 55 42·22	0·63	0·70	22 12 21·8	0·0	9·2	1·0
16	5 55 26·94	0·64	0·70	22 12 20·6	0·0	9·2	1·0
17	5 55 11·32	0·66	0·70	22 12 19·5	0·0	9·2	1·0
18	5 54 55·37	0·67	0·70	22 12 18·4	0·0	9·2	1·1
19	5 54 39·09	0·69	0·70	22 12 17·3	0·0	9·2	1·1
20	5 54 22·49	0·70	0·71	22 12 16·1	0·0	9·3	1·1
21	5 54 5·58	0·71	0·71	22 12 15·0	0·0	9·3	1·1
22	5 53 48·37	0·72	0·71	22 12 13·9	0·0	9·3	1·1
23	5 53 30·87	0·74	0·71	22 12 12·8	0·0	9·3	1·1
24	5 53 13·08	0·75	0·71	22 12 11·6	0·0	9·3	
25	5 52 55·02	0·76	0·71	22 12 10·5	0·0	9·	
26	5 52 36·69	0·77	0·71	22 12 9·3	0·0	9·	
27	5 52 18·10	0·78	0·71	22 12 8·1	0·0	9·	
28	5 51 59·27	0·79	0·71	22 12 7·0	0·1	9	
29	5 51 40·20	0·80	0·71	22 12 5·7	0·1	9	
30	5 51 20·90	0·81	0·71	22 12 4·4	0·1	9	
31	5 51 1·38	— 0·82	0·72	N.22 12 3·1	— 0·1	9	

DECEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	Noo
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	5 51 12·14	N.22 12 3·8	0·9071939	13 9·8	85 54 2·0	S.1 6 51·5	0·954
2	5 50 52·48	22 12 2·5	·9069113	13 5·5	85 56 16·9	1 6 46·3	·954
3	5 50 32·61	22 12 1·1	·9066446	13 1·2	85 58 31·8	1 6 41·0	·954
4	5 50 12·55	22 11 59·7	·9063941	12 57·0	86 0 46·6	1 6 35·8	·954
5	5 49 52·31	22 11 58·3	·9061598	12 52·7	86 3 1·5	1 6 30·5	·954
6	5 49 31·91	22 11 56·8	·9059420	12 48·4	86 5 16·4	1 6 25·3	·954
7	5 49 11·35	22 11 55·3	·9057407	12 44·2	86 7 31·3	1 6 20·0	·954
8	5 48 50·64	22 11 53·8	·9055561	12 39·9	86 9 46·2	1 6 14·8	·954
9	5 48 29·81	22 11 52·3	·9053884	12 35·6	86 12 1·1	1 6 9·5	·954
10	5 48 8·86	22 11 50·7	·9052374	12 31·3	86 14 16·0	1 6 4·3	·954
11	5 47 47·80	22 11 49·1	·9051035	12 27·0	86 16 30·9	1 5 59·0	·954
12	5 47 26·65	22 11 47·5	·9049867	12 22·7	86 18 45·8	1 5 53·8	·954
13	5 47 5·42	22 11 45·9	·9048869	12 18·5	86 21 0·7	1 5 48·5	·954
14	5 46 44·12	22 11 44·2	·9048043	12 14·2	86 23 15·6	1 5 43·2	·954
15	5 46 22·77	22 11 42·6	·9047389	12 9·9	86 25 30·5	1 5 38·0	·954
16	5 46 1·38	22 11 40·9	·9046906	12 5·6	86 27 45·4	1 5 32·7	·954
17	5 45 39·96	22 11 39·2	·9046596	12 1·3	86 30 0·3	1 5 27·4	·954
18	5 45 18·52	22 11 37·5	·9046458	11 57·0	86 32 15·2	1 5 22·2	·954
19	5 44 57·08	22 11 35·8	·9046491	11 52·7	86 34 30·1	1 5 16·9	·954
20	5 44 35·65	22 11 34·0	·9046697	11 48·5	86 36 45·0	1 5 11·6	·954
21	5 44 14·24	22 11 32·3	·9047075	11 44·2	86 38 59·9	1 5 6·4	·954
22	5 43 52·86	22 11 30·5	·9047624	11 39·9	86 41 14·8	1 5 1·1	·954
23	5 43 31·53	22 11 28·8	·9048344	11 35·6	86 43 29·7	1 4 55·8	·954
24	5 43 10·25	22 11 27·1	·9049235	11 31·3	86 45 44·6	1 4 50·5	·954
25	5 42 49·05	22 11 25·4	·9050296	11 27·0	86 47 59·5	1 4 45·2	·954
26	5 42 27·92	22 11 23·7	·9051528	11 22·7	86 50 14·4	1 4 40·0	·954
27	5 42 6·88	22 11 22·0	·9052929	11 18·5	86 52 29·3	1 4 34·7	·954
28	5 41 45·95	22 11 20·4	·9054498	11 14·2	86 54 44·3	1 4 29·4	·954
29	5 41 25·13	22 11 18·8	·9056236	11 9·9	86 56 59·2	1 4 24·1	·954
30	5 41 4·43	22 11 17·2	·9058141	11 5·6	86 59 14·1	1 4 18·8	·954
31	5 40 43·88	22 11 15·7	·9060213	11 1·4	87 1 29·0	1 4 13·5	·954
32	5 40 23·47	N.2 2 11 14·3	0·9062451	10 57·1	87 3 43·9	S.1 4 8·2	0·954

DECEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	5 51 1·38	— 0·82	0·72	N.22 12 3·1	— 0·1	9·4	1·1
2	5 50 41·66	0·83	0·72	22 12 1·7	0·1	9·4	1·1
3	5 50 21·75	0·84	0·72	22 12 0·4	0·1	9·4	1·1
4	5 50 1·65	0·84	0·72	22 11 59·0	0·1	9·4	1·1
5	5 49 41·38	0·85	0·72	22 11 57·5	0·1	9·4	1·1
6	5 49 20·95	0·85	0·72	22 11 56·0	0·1	9·4	1·1
7	5 49 0·37	0·86	0·72	22 11 54·5	0·1	9·4	1·1
8	5 48 39·66	0·87	0·72	22 11 53·0	0·1	9·4	1·1
9	5 48 18·83	0·87	0·72	22 11 51·4	0·1	9·4	1·1
10	5 47 57·88	0·87	0·72	22 11 49·8	0·1	9·4	1·1
11	5 47 36·84	0·88	0·72	22 11 48·2	0·1	9·4	1·1
12	5 47 15·71	0·88	0·72	22 11 46·6	0·1	9·4	1·1
13	5 46 54·51	0·88	0·72	22 11 45·0	0·1	9·4	1·1
14	5 46 33·24	0·89	0·72	22 11 43·4	0·1	9·4	1·1
15	5 46 11·93	0·89	0·72	22 11 41·7	0·1	9·4	1·1
16	5 45 50·59	0·89	0·72	22 11 40·0	0·1	9·4	1·1
17	5 45 29·23	0·89	0·72	22 11 38·3	0·1	9·4	1·1
18	5 45 7·85	0·89	0·72	22 11 36·6	0·1	9·4	1·1
19	5 44 46·47	0·89	0·72	22 11 34·9	0·1	9·4	1·1
20	5 44 25·11	0·89	0·72	22 11 33·2	0·1	9·4	1·1
21	5 44 3·78	0·89	0·72	22 11 31·4	0·1	9·4	1·1
22	5 43 42·49	0·89	0·72	22 11 29·7	0·1	9·4	1·1
23	5 43 21·25	0·88	0·72	22 11 28·0	0·1	9·4	1·1
24	5 43 0·06	0·88	0·72	22 11 26·3	0·1	9·4	1·1
25	5 42 38·95	0·88	0·72	22 11 24·6	0·1		1·1
26	5 42 17·93	0·87	0·72	22 11 22·9			1·1
27	5 41 57·01	0·87	0·72	22 11 21·3			1·1
28	5 41 36·19	0·87	0·72	22 11 19·7			1·1
29	5 41 15·49	0·86	0·72	22 11 18·1			1·1
30	5 40 54·92	0·85	0·72	22 11 16·5			1·1
31	5 40 34·49	0·85	0·72	22 11 15·0			1·1
32	5 40 14·21	— 0·84	0·72	N.22 11 13·6			1·1

JANUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vec.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 42 17·84	N. 15 22 15·5	1·2812977	7 58·7	45 19 55·5	S. 0 21 47·9	1·2934
2	2 42 13·96	15 21 59·3	·2816282	7 54·7	45 20 35·9	0 21 47·4	·2934
3	2 42 10·28	15 21 44·0	·2819620	7 50·7	45 21 16·3	0 21 46·9	·2934
4	2 42 6·79	15 21 29·6	·2822990	7 46·7	45 21 56·7	0 21 46·4	·2934
5	2 42 3·49	15 21 16·0	·2826392	7 42·7	45 22 37·1	0 21 45·9	·2934
6	2 42 0·38	15 21 3·4	·2829823	7 38·7	45 23 17·5	0 21 45·5	·2934
7	2 41 57·47	15 20 51·7	·2833283	7 34·8	45 23 57·9	0 21 45·0	·2934
8	2 41 54·76	15 20 40·9	·2836771	7 30·8	45 24 38·4	0 21 44·5	·2934
9	2 41 52·25	15 20 31·0	·2840286	7 26·8	45 25 18·8	0 21 44·0	·2934
10	2 41 49·94	15 20 22·1	·2843827	7 22·8	45 25 59·2	0 21 43·5	·2934
11	2 41 47·82	15 20 14·1	·2847392	7 18·9	45 26 39·6	0 21 43·0	·2934
12	2 41 45·91	15 20 7·0	·2850980	7 14·9	45 27 20·0	0 21 42·6	·2934
13	2 41 44·21	15 20 0·9	·2854590	7 10·9	45 28 0·4	0 21 42·1	·2934
14	2 41 42·71	15 19 55·7	·2858221	7 7·0	45 28 40·8	0 21 41·6	·2934
15	2 41 41·41	15 19 51·5	·2861872	7 3·0	45 29 21·3	0 21 41·1	·2934
16	2 41 40·32	15 19 48·2	·2865540	6 59·1	45 30 1·7	0 21 40·6	·2934
17	2 41 39·44	15 19 45·9	·2869225	6 55·1	45 30 42·1	0 21 40·1	·2934
18	2 41 38·77	15 19 44·5	·2872926	6 51·2	45 31 22·5	0 21 39·7	·2934
19	2 41 38·31	15 19 44·1	·2876641	6 47·3	45 32 2·9	0 21 39·2	·2934
20	2 41 38·05	15 19 44·6	·2880369	6 43·3	45 32 43·3	0 21 38·7	·2934
21	2 41 38·01	15 19 46·1	·2884109	6 39·4	45 33 23·7	0 21 38·2	·2934
22	2 41 38·18	15 19 48·6	·2887859	6 35·5	45 34 4·1	0 21 37·7	·2934
23	2 41 38·56	15 19 52·1	·2891618	6 31·6	45 34 44·6	0 21 37·2	·2934
24	2 41 39·14	15 19 56·5	·2895385	6 27·6	45 35 25·0	0 21 36·8	·2933
25	2 41 39·94	15 20 1·9	·2899159	6 23·7	45 36 5·4	0 21 36·3	·2933
26	2 41 40·95	15 20 8·3	·2902938	6 19·8	45 36 45·8	0 21 35·8	·2933
27	2 41 42·16	15 20 15·6	·2906722	6 15·9	45 37 26·2	0 21 35·3	·2933
28	2 41 43·58	15 20 23·9	·2910508	6 12·0	45 38 6·6	0 21 34·8	·2933
29	2 41 45·21	15 20 33·1	·2914296	6 8·1	45 38 47·0	0 21 34·3	·2933
30	2 41 47·05	15 20 43·3	·2918085	6 4·2	45 39 27·4	0 21 33·9	·2933
31	2 41 49·09	15 20 54·4	·2921873	6 0·3	45 40 7·8	0 21 33·4	·2933
32	2 41 51·34	N. 15 21 6·5	1·2925660	5 56·4	45 40 48·2	S. 0 21 32·9	1·2933

JANUARY, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	2 42 16·53	− 0·16	0·13	N.15 22 10·0	− 0·7	1·9	0·4
2	2 42 12·73	0·15	0·13	15 21 54·1	0·6	1·9	0·4
3	2 42 9·12	0·15	0·13	15 21 39·2	0·6	1·9	0·4
4	2 42 5·70	0·14	0·13	15 21 25·1	0·6	1·9	0·4
5	2 42 2·47	0·13	0·13	15 21 11·9	0·5	1·9	0·4
6	2 41 59·44	0·12	0·13	15 20 59·6	0·5	1·9	0·4
7	2 41 56·60	0·11	0·13	15 20 48·2	0·5	1·9	0·4
8	2 41 53·96	0·11	0·13	15 20 37·7	0·4	1·9	0·4
9	2 41 51·51	0·10	0·13	15 20 28·1	0·4	1·9	0·4
10	2 41 49·26	0·09	0·13	15 20 19·5	0·3	1·9	0·4
11	2 41 47·22	0·08	0·13	15 20 11·8	0·3	1·9	0·4
12	2 41 45·38	0·07	0·13	15 20 5·1	0·3	1·9	0·4
13	2 41 43·74	0·06	0·13	15 19 59·3	0·2	1·9	0·4
14	2 41 42·30	0·06	0·13	15 19 54·4	0·2	1·9	0·4
15	2 41 41·07	0·05	0·13	15 19 50·4	0·1	1·9	0·4
16	2 41 40·04	0·04	0·13	15 19 47·4	0·1	1·9	0·4
17	2 41 39·22	0·03	0·13	15 19 45·4	− 0·1	1·9	0·4
18	2 41 38·61	0·02	0·13	15 19 44·3	0·0	1·9	0·4
19	2 41 38·21	− 0·01	0·13	15 19 44·1	0·0	1·9	0·4
20	2 41 38·02	0·00	0·13	15 19 44·9	+ 0·1	1·9	0·4
21	2 41 38·03	+ 0·01	0·13	15 19 46·7	0·1	1·9	0·4
22	2 41 38·26	0·02	0·13	15 19 49·5	0·1		0·4
23	2 41 38·70	0·02	0·13	15 19 53·2	0·		0·4
24	2 41 39·34	0·03	0·13	15 19 57·9	0		0·4
25	2 41 40·19	0·04	0·13	15 20 3·5			0
26	2 41 41·24	0·05	0·13	15 20 10·1			0
27	2 41 42·51	0·06	0·13	15 20 17·7			0
28	2 41 43·98	0·07	0·13	15 20 26·2			0
29	2 41 45·66	0·07	0·13	15 20 35·6			0
30	2 41 47·55	0·08	0·13	15 20 46·0			
31	2 41 49·64	0·09	0·13	15 20 57·3			
32	2 41 51·93	+ 0·10	0·13	N.15 21 9·6			

FEBRUARY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	No
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 41 51·34	N. 15 21 6·5	1·2925660	5 56·4	45 40 48·2	S. 0 21 32·9	1·293
2	2 41 53·80	15 21 19·5	·2929444	5 52·5	45 41 28·6	0 21 32·4	·293
3	2 41 56·46	15 21 33·4	·2933224	5 48·6	45 42 9·0	0 21 31·9	·293
4	2 41 59·33	15 21 48·3	·2937000	5 44·7	45 42 49·4	0 21 31·4	·293
5	2 42 2·40	15 22 4·1	·2940770	5 40·8	45 43 29·8	0 21 31·0	·293
6	2 42 5·67	15 22 20·8	·2944533	5 37·0	45 44 10·2	0 21 30·5	·293
7	2 42 9·15	15 22 38·4	·2948288	5 33·1	45 44 50·6	0 21 30·0	·293
8	2 42 12·83	15 22 57·0	·2952034	5 29·2	45 45 31·0	0 21 29·5	·293
9	2 42 16·71	15 23 16·5	·2955770	5 25·4	45 46 11·4	0 21 29·0	·293
10	2 42 20·79	15 23 36·9	·2959495	5 21·5	45 46 51·8	0 21 28·5	·293
11	2 42 25·08	15 23 58·2	·2963208	5 17·6	45 47 32·1	0 21 28·1	·293
12	2 42 29·56	15 24 20·5	·2966908	5 13·8	45 48 12·5	0 21 27·6	·293
13	2 42 34·24	15 24 43·6	·2970593	5 9·9	45 48 52·9	0 21 27·1	·293
14	2 42 39·11	15 25 7·6	·2974263	5 6·1	45 49 33·3	0 21 26·6	·293
15	2 42 44·19	15 25 32·5	·2977916	5 2·2	45 50 13·7	0 21 26·1	·293
16	2 42 49·46	15 25 58·3	·2981551	4 58·4	45 50 54·1	0 21 25·6	·293
17	2 42 54·92	15 26 24·9	·2985167	4 54·5	45 51 34·5	0 21 25·2	·293
18	2 43 0·57	15 26 52·4	·2988763	4 50·7	45 52 14·9	0 21 24·7	·293
19	2 43 6·42	15 27 20·8	·2992339	4 46·9	45 52 55·3	0 21 24·2	·293
20	2 43 12·45	15 27 50·0	·2995892	4 43·0	45 53 35·7	0 21 23·7	·293
21	2 43 18·67	15 28 20·0	·2999422	4 39·2	45 54 16·1	0 21 23·2	·293
22	2 43 25·08	15 28 50·9	·3002929	4 35·4	45 54 56·4	0 21 22·7	·293
23	2 43 31·67	15 29 22·5	·3006410	4 31·6	45 55 36·8	0 21 22·3	·293
24	2 43 38·44	15 29 54·9	·3009865	4 27·8	45 56 17·2	0 21 21·8	·293
25	2 43 45·39	15 30 28·2	·3013294	4 23·9	45 56 57·6	0 21 21·3	·293
26	2 43 52·51	15 31 2·2	·3016695	4 20·1	45 57 38·0	0 21 20·8	·293
27	2 43 59·81	15 31 37·0	·3020068	4 16·3	45 58 18·4	0 21 20·3	·293
28	2 44 7·29	15 32 12·5	·3023411	4 12·5	45 58 58·8	0 21 19·8	·293
29	2 44 14·93	N. 15 32 48·8	1·3026724	4 8·7	45 59 39·1	S. 0 21 19·3	1·293

FEBRUARY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
2 41 51·93	+ 0·10	0·13	N.15 21 9·6	+ 0·5	1·9	0·4
2 41 54·43	0·11	0·13	15 21 22·8	0·6	1·9	0·4
2 41 57·14	0·12	0·13	15 21 36·9	0·6	1·9	0·4
2 42 0·05	0·13	0·13	15 21 52·0	0·6	1·9	0·4
2 42 3·16	0·13	0·13	15 22 7·9	0·7	1·9	0·4
2 42 6·47	0·14	0·13	15 22 24·8	0·7	1·9	0·4
2 42 9·98	0·15	0·13	15 22 42·6	0·8	1·9	0·4
2 42 13·70	0·16	0·13	15 23 1·4	0·8	1·9	0·4
2 42 17·62	0·17	0·13	15 23 21·0	0·8	1·9	0·4
2 42 21·73	0·18	0·13	15 23 41·6	0·9	1·9	0·4
2 42 26·05	0·18	0·13	15 24 3·0	0·9	1·9	0·4
2 42 30·56	0·19	0·13	15 24 25·4	1·0	1·9	0·4
2 42 35·27	0·20	0·13	15 24 48·7	1·0	1·9	0·4
2 42 40·17	0·21	0·13	15 25 12·8	1·0	1·9	0·4
2 42 45·27	0·22	0·13	15 25 37·8	1·1	1·9	0·4
2 42 50·57	0·22	0·13	15 26 3·7	1·1	1·9	0·4
2 42 56·06	0·23	0·13	15 26 30·5	1·1	1·9	0·4
2 43 1·74	0·24	0·13	15 26 58·1	1·2	1·9	0·4
2 43 7·61	0·25	0·13	15 27 26·5	1·2	1·9	0·4
2 43 13·66	0·26	0·13	15 27 55·8	1·2	1·9	0·4
2 43 19·90	0·26	0·13	15 28 25·9	1·3	1·9	0·4
2 43 26·32	0·27	0·13	15 28 56·8	1·3	1·9	0·4
2 43 32·93	0·28	0·13	15 29 28·5	1·3	1·	0·4
2 43 39·72	0·29	0·13	15 30 1·1	1·4		·4
2 43 46·68	0·29	0·13	15 30 34·4	1·4		4
2 43 53·82	0·30	0·13	15 31 8·4	1·4		
2 44 1·13	0·31	0·13	15 31 43·3	1		
2 44 8·62	0·32	0·13	15 32 18·9	1		
2 44 16·27	+ 0·32	0·13	N.15 32 55·2	+		

MARCH, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 44 14·93	N. 15 32 48·8	1·3026724	4 8·7	45 59 39·1	S. 0 21 19·3	1·293
2	2 44 22·75	15 33 25·9	·3030007	4 4·9	46 0 19·5	0 21 18·9	·293
3	2 44 30·74	15 34 3·7	·3033258	4 1·1	46 0 59·9	0 21 18·4	·293
4	2 44 38·89	15 34 42·2	·3036476	3 57·3	46 1 40·3	0 21 17·9	·293
5	2 44 47·21	15 35 21·4	·3039662	3 53·5	46 2 20·7	0 21 17·4	·293
6	2 44 55·69	15 36 1·3	·3042814	3 49·7	46 3 1·1	0 21 16·9	·293
7	2 45 4·34	15 36 42·0	·3045931	3 45·9	46 3 41·4	0 21 16·4	·293
8	2 45 13·14	15 37 23·3	·3049013	3 42·1	46 4 21·8	0 21 15·9	·293
9	2 45 22·10	15 38 5·3	·3052059	3 38·4	46 5 2·2	0 21 15·5	·293
10	2 45 31·22	15 38 47·9	·3055069	3 34·6	46 5 42·6	0 21 15·0	·293
11	2 45 40·49	15 39 31·2	·3058041	3 30·8	46 6 23·0	0 21 14·5	·293
12	2 45 49·91	15 40 15·2	·3060974	3 27·0	46 7 3·4	0 21 14·0	·293
13	2 45 59·48	15 40 59·8	·3063869	3 23·3	46 7 43·8	0 21 13·5	·293
14	2 46 9·20	15 41 45·0	·3066724	3 19·5	46 8 24·1	0 21 13·0	·293
15	2 46 19·06	15 42 30·8	·3069539	3 15·7	46 9 4·5	0 21 12·5	·293
16	2 46 29·07	15 43 17·2	·3072312	3 12·0	46 9 44·9	0 21 12·0	·293
17	2 46 39·22	15 44 4·2	·3075044	3 8·2	46 10 25·3	0 21 11·6	·293
18	2 46 49·51	15 44 51·8	·3077733	3 4·4	46 11 5·7	0 21 11·1	·293
19	2 46 59·93	15 45 39·9	·3080379	3 0·7	46 11 46·1	0 21 10·6	·293
20	2 47 10·48	15 46 28·6	·3082981	2 56·9	46 12 26·5	0 21 10·1	·293
21	2 47 21·17	15 47 17·8	·3085539	2 53·1	46 13 6·9	0 21 9·6	·293
22	2 47 31·98	15 48 7·5	·3088052	2 49·4	46 13 47·3	0 21 9·1	·293
23	2 47 42·92	15 48 57·7	·3090519	2 45·6	46 14 27·6	0 21 8·6	·293
24	2 47 53·98	15 49 48·4	·3092940	2 41·9	46 15 8·0	0 21 8·2	·293
25	2 48 5·16	15 50 39·5	·3095314	2 38·1	46 15 48·4	0 21 7·7	·293
26	2 48 16·45	15 51 31·1	·3097640	2 34·4	46 16 28·8	0 21 7·2	·293
27	2 48 27·86	15 52 23·2	·3099919	2 30·7	46 17 9·2	0 21 6·7	·293
28	2 48 39·39	15 53 15·7	·3102150	2 26·9	46 17 49·6	0 21 6·2	·293
29	2 48 51·03	15 54 8·6	·3104333	2 23·2	46 18 30·0	0 21 5·7	·293
30	2 49 2·77	15 55 2·0	·3106467	2 19·4	46 19 10·4	0 21 5·2	·293
31	2 49 14·61	15 55 55·8	·3108552	2 15·7	46 19 50·8	0 21 4·7	·293
32	2 49 26·56	N. 15 56 50·0	1·3110587	2 12·0	46 20 31·2	S. 0 21 4·3	1·293

MARCH, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	2 44 16·27	+ 0·32	0·13	N.15 32 55·2	+ 1·5	1·9	0·4
2	2 44 24·10	0·33	0·13	15 33 32·3	1·6	1·9	0·4
3	2 44 32·09	0·34	0·13	15 34 10·1	1·6	1·9	0·4
4	2 44 40·25	0·34	0·13	15 34 48·6	1·6	1·9	0·4
5	2 44 48·57	0·35	0·13	15 35 27·8	1·7	1·9	0·4
6	2 44 57·06	0·36	0·12	15 36 7·8	1·7	1·8	0·4
7	2 45 5·71	0·36	0·12	15 36 48·4	1·7	1·8	0·4
8	2 45 14·51	0·37	0·12	15 37 29·7	1·7	1·8	0·4
9	2 45 23·47	0·38	0·12	15 38 11·7	1·8	1·8	0·4
10	2 45 32·59	0·38	0·12	15 38 54·3	1·8	1·8	0·4
11	2 45 41·86	0·39	0·12	15 39 37·6	1·8	1·8	0·4
12	2 45 51·28	0·40	0·12	15 40 21·5	1·8	1·8	0·4
13	2 46 0·85	0·40	0·12	15 41 6·1	1·9	1·8	0·4
14	2 46 10·56	0·41	0·12	15 41 51·3	1·9	1·8	0·4
15	2 46 20·42	0·41	0·12	15 42 37·1	1·9	1·8	0·4
16	2 46 30·41	0·42	0·12	15 43 23·4	1·9	1·8	0·4
17	2 46 40·55	0·43	0·12	15 44 10·4	2·0	1·8	0·4
18	2 46 50·83	0·43	0·12	15 44 57·9	2·0	1·8	0·4
19	2 47 1·24	0·44	0·12	15 45 46·0	2·0	1·8	0·4
20	2 47 11·79	0·44	0·12	15 46 34·6	2·0	1·8	0·4
21	2 47 22·46	0·45	0·12	15 47 23·7	2·1	1·8	0·4
22	2 47 33·26	0·45	0·12	15 48 13·4	2·1	1·8	0·4
23	2 47 44·18	0·46	0·12	15 49 3·5	2·1		0·4
24	2 47 55·23	0·46	0·12	15 49 54·1	2·1		0·4
25	2 48 6·39	0·47	0·12	15 50 45·2	2·1		0·4
26	2 48 17·67	0·47	0·12	15 51 36·7	2·2		0·4
27	2 48 29·06	0·48	0·12	15 52 28·7	2·2		0·4
28	2 48 40·57	0·48	0·12	15 53 21·1	2		
29	2 48 52·19	0·49	0·12	15 54 13·9	2		
30	2 49 3·91	0·49	0·12	15 55 7·2	2		
31	2 49 15·73	0·49	0·12	15 56 0·9			
32	2 49 27·66	+ 0·50	0·12	N.15 56 55·0	+		

APRIL, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Ve
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 49 26·56	N.15 56 50·0	1·3110587	2 12·0	46 20 31·2	S.0 21 4·3	1·29317
2	2 49 38·61	15 57 44·5	·3112573	2 8·3	46 21 11·6	0 21 3·8	·29316
3	2 49 50·76	15 58 39·4	·3114508	2 4·5	46 21 52·0	0 21 3·3	·29316
4	2 50 3·00	15 59 34·7	·3116393	2 0·8	46 22 32·4	0 21 2·8	·29316
5	2 50 15·34	16 0 30·3	·3118227	1 57·1	46 23 12·8	0 21 2·3	·29315
6	2 50 27·76	16 1 26·2	·3120010	1 53·3	46 23 53·2	0 21 1·8	·29315
7	2 50 40·27	16 2 22·4	·3121741	1 49·6	46 24 33·6	0 21 1·3	·29315
8	2 50 52·87	16 3 19·0	·3123420	1 45·9	46 25 14·1	0 21 0·9	·29314
9	2 51 5·55	16 4 15·8	·3125047	1 42·2	46 25 54·5	0 21 0·4	·29314
10	2 51 18·31	16 5 12·9	·3126621	1 38·5	46 26 34·9	0 20 59·9	·29314
11	2 51 31·15	16 6 10·3	·3128142	1 34·7	46 27 15·3	0 20 59·4	·29313
12	2 51 44·06	16 7 8·0	·3129609	1 31·0	46 27 55·7	0 20 58·9	·29313
13	2 51 57·05	16 8 5·9	·3131023	1 27·3	46 28 36·2	0 20 58·4	·29313
14	2 52 10·11	16 9 4·1	·3132382	1 23·6	46 29 16·6	0 20 57·9	·29312
15	2 52 23·23	16 10 2·4	·3133687	1 19·9	46 29 57·0	0 20 57·4	·29312
16	2 52 36·42	16 11 1·0	·3134937	1 16·2	46 30 37·4	0 20 57·0	·29312
17	2 52 49·67	16 11 59·7	·3136132	1 12·4	46 31 17·8	0 20 56·5	·29311
18	2 53 2·98	16 12 58·6	·3137271	1 8·7	46 31 58·3	0 20 56·0	·29311
19	2 53 16·34	16 13 57·7	·3138355	1 5·0	46 32 38·7	0 20 55·5	·29311
20	2 53 29·76	16 14 56·9	·3139383	1 1·3	46 33 19·2	0 20 55·0	·29310
21	2 53 43·23	16 15 56·3	·3140355	0 57·6	46 33 59·6	0 20 54·5	·29310
22	2 53 56·74	16 16 55·8	·3141271	0 53·9	46 34 40·0	0 20 54·0	·29310
23	2 54 10·30	16 17 55·4	·3142132	0 50·2	46 35 20·5	0 20 53·6	·29309
24	2 54 23·90	16 18 55·1	·3142935	0 46·5	46 36 0·9	0 20 53·1	·29309
25	2 54 37·53	16 19 54·8	·3143683	0 42·8	46 36 41·3	0 20 52·6	·29309
26	2 54 51·20	16 20 54·7	·3144374	0 39·1	46 37 21·8	0 20 52·1	·29308
27	2 55 4·91	16 21 54·6	·3145009	0 35·4	46 38 2·2	0 20 51·6	·29308
28	2 55 18·65	16 22 54·6	·3145588	0 31·7	46 38 42·7	0 20 51·1	·29308
29	2 55 32·41	16 23 54·6	·3146111	0 28·0	46 39 23·1	0 20 50·6	·29307
30	2 55 46·20	16 24 54·6	·3146577	0 24·3	46 40 3·6	0 20 50·1	·29307
31	2 56 0·01	N.16 25 54·6	1·3146987	0 20·6	46 40 44·0	S.0 20 49·6	1·29307

APRIL, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
2 49 27·66	+ 0·50	0·12	N.15 56 55·0	+ 2·3	1·8	0·4
2 49 39·69	0·50	0·12	15 57 49·4	2·3	1·8	0·4
2 49 51·81	0·51	0·12	15 58 44·2	2·3	1·8	0·4
2 50 4·03	0·51	0·12	15 59 39·3	2·3	1·8	0·4
2 50 16·34	0·51	0·12	16 0 34·8	2·3	1·8	0·4
2 50 28·74	0·52	0·12	16 1 30·6	2·3	1·8	0·4
2 50 41·23	0·52	0·12	16 2 26·7	2·3	1·8	0·4
2 50 53·80	0·53	0·12	16 3 23·1	2·4	1·8	0·4
2 51 6·45	0·53	0·12	16 4 19·8	2·4	1·8	0·4
2 51 19·19	0·53	0·12	16 5 16·8	2·4	1·8	0·4
2 51 32·00	0·54	0·12	16 6 14·1	2·4	1·8	0·4
2 51 44·88	0·54	0·12	16 7 11·6	2·4	1·8	0·4
2 51 57·84	0·54	0·12	16 8 9·4	2·4	1·8	0·4
2 52 10·87	0·54	0·12	16 9 7·4	2·4	1·8	0·4
2 52 23·96	0·55	0·12	16 10 5·6	2·4	1·8	0·4
2 52 37·12	0·55	0·12	16 11 4·1	2·4	1·8	0·4
2 52 50·34	0·55	0·12	16 12 2·7	2·4	1·8	0·4
2 53 3·62	0·55	0·12	16 13 1·4	2·5	1·8	0·4
2 53 16·95	0·56	0·12	16 14 0·4	2·5	1·8	0·4
2 53 30·34	0·56	0·12	16 14 59·5	2·5	1·8	0·4
2 53 43·77	0·56	0·12	16 15 58·7	2·5	1·8	0·4
2 53 57·25	0·56	0·12	16 16 58·0	2·5	1·8	0·4
2 54 10·77	0·56	0·12	16 17 57·5	2·5	1·8	0·4
2 54 24·34	0·57	0·12	16 18 57·0	2·5	1·8	0·4
2 54 37·94	0·57	0·12	16 19 56·6	2·5	1·8	0·4
2 54 51·58	0·57	0·12	16 20 56·3	2·5	1·8	
2 55 5·25	0·57	0·12	16 21 56·1	2·5	1·8	
2 55 18·95	0·57	0·12	16 22 55·9	2·5	1·8	
2 55 32·68	0·57	0·12	16 23 55·7	2·5	1·	
2 55 46·43	0·57	0·12	16 24 55·6	2·5	1·	
2 56 0·20	+ 0·57	0·12	N.16 25 55·5	+ 2·5	1	

MAY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	2 56 0·01	N.16 25 54·6	1·3146987	0 20·6	46 40 44·0	S.0 20 49·6	1·293
2	2 56 13·84	16 26 54·7	·3147340	0 16·9	46 41 24·5	0 20 49·2	·293
3	2 56 27·69	16 27 54·7	·3147637	0 13·2	46 42 4·9	0 20 48·7	·293
4	2 56 41·56	16 28 54·7	·3147878	0 9·5	46 42 45·4	0 20 48·2	·293
5	2 56 55·44	16 29 54·7	·3148062	0 5·7	46 43 25·9	0 20 47·7	·293
6	2 57 9·33	16 30 54·6	·3148190	{0 / 23 58·3}	46 44 6·3	0 20 47·2	·293
7	2 57 23·23	16 31 54·5	·3148261	23 54·6	46 44 46·8	0 20 46·7	·293
8	2 57 37·13	16 32 54·3	·3148275	23 50·9	46 45 27·3	0 20 46·2	·293
9	2 57 51·03	16 33 54·1	·3148233	23 47·2	46 46 7·7	0 20 45·7	·293
10	2 58 4·94	16 34 53·8	·3148134	23 43·5	46 46 48·2	0 20 45·2	·293
11	2 58 18·84	16 35 53·3	·3147978	23 39·8	46 47 28·7	0 20 44·7	·293
12	2 58 32·74	16 36 52·8	·3147765	23 36·1	46 48 9·2	0 20 44·3	·293
13	2 58 46·63	16 37 52·1	·3147495	23 32·4	46 48 49·6	0 20 43·8	·293
14	2 59 0·50	16 38 51·3	·3147169	23 28·7	46 49 30·1	0 20 43·3	·293
15	2 59 14·36	16 39 50·4	·3146786	23 25·0	46 50 10·6	0 20 42·8	·293
16	2 59 28·20	16 40 49·3	·3146346	23 21·3	46 50 51·1	0 20 42·3	·293
17	2 59 42·03	16 41 48·1	·3145850	23 17·6	46 51 31·5	0 20 41·8	·293
18	2 59 55·83	16 42 46·6	·3145298	23 13·9	46 52 12·0	0 20 41·3	·293
19	3 0 9·60	16 43 45·0	·3144689	23 10·2	46 52 52·5	0 20 40·8	·293
20	3 0 23·35	16 44 43·2	·3144024	23 6·5	46 53 33·0	0 20 40·3	·293
21	3 0 37·06	16 45 41·1	·3143304	23 2·8	46 54 13·5	0 20 39·8	·293
22	3 0 50·74	16 46 38·8	·3142529	22 59·1	46 54 54·0	0 20 39·4	·293
23	3 1 4·38	16 47 36·3	·3141698	22 55·4	46 55 34·5	0 20 38·9	·292
24	3 1 17·98	16 48 33·5	·3140812	22 51·7	46 56 15·0	0 20 38·4	·292
25	3 1 31·54	16 49 30·4	·3139872	22 48·0	46 56 55·5	0 20 37·9	·292
26	3 1 45·06	16 50 27·1	·3138877	22 44·3	46 57 36·0	0 20 37·4	·292
27	3 1 58·53	16 51 23·5	·3137828	22 40·6	46 58 16·5	0 20 36·9	·292
28	3 2 11·95	16 52 19·6	·3136725	22 36·9	46 58 57·0	0 20 36·4	·292
29	3 2 25·32	16 53 15·4	·3135569	22 33·1	46 59 37·5	0 20 35·9	·292
30	3 2 38·64	16 54 11·0	·3134359	22 29·4	47 0 18·1	0 20 35·4	·292
31	3 2 51·90	16 55 6·2	·3133096	22 25·7	47 0 58·6	0 20 34·9	·292
32	3 3 5·10	N.16 56 1·0	1·3131780	22 22·0	47 1 39·1	S.0 20 34·5	1 292

MAY, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	2 56 0·20	+ 0·57	0·12	N.16 25 55·5	+ 2·5	1·8	0·4
2	2 56 14·00	0·58	0·12	16 26 55·4	2·5	1·8	0·4
3	2 56 27·82	0·58	0·12	16 27 55·3	2·5	1·8	0·4
4	2 56 41·65	0·58	0·12	16 28 55·1	2·5	1·8	0·4
5	2 56 55·49	0·58	0·12	16 29 54·9	2·5	1·8	0·4
6	2 57 9·35	0·58	0·12	16 30 54·7	2·5	1·8	0·4
7	{ 2 57 23·21 / 2 57 37·07 }	{ 0·58 / 0·58 }	{ 0·12 / 0·12 }	{ 16 31 54·5 / 16 32 54·2 }	{ 2·5 / 2·5 }	{ 1·8 / 1·8 }	{ 0·4 / 0·4 }
8	2 57 50·94	0·58	0·12	16 33 53·7	2·5	1·8	0·4
9	2 58 4·81	0·58	0·12	16 34 53·2	2·5	1·8	0·4
10	2 58 18·68	0·58	0·12	16 35 52·7	2·5	1·8	0·4
11	2 58 32·54	0·58	0·12	16 36 52·0	2·5	1·8	0·4
12	2 58 46·39	0·58	0·12	16 37 51·1	2·5	1·8	0·4
13	2 59 0·23	0·58	0·12	16 38 50·2	2·5	1·8	0·4
14	2 59 14·06	0·58	0·12	16 39 49·1	2·5	1·8	0·4
15	2 59 27·87	0·57	0·12	16 40 47·9	2·4	1·8	0·4
16	2 59 41·65	0·57	0·12	16 41 46·5	2·4	1·8	0·4
17	2 59 55·42	0·57	0·12	16 42 44·9	2·4	1·8	0·4
18	3 0 9·16	0·57	0·12	16 43 43·1	2·4	1·8	0·4
19	3 0 22·87	0·57	0·12	16 44 41·2	2·4	1·8	0·4
20	3 0 36·55	0·57	0·12	16 45 39·0	2·4	1·8	0·4
21	3 0 50·20	0·57	0·12	16 46 36·5	2·4		0·4
22	3 1 3·80	0·57	0·12	16 47 33·8			0·4
23	3 1 17·37	0·56	0·12	16 48 30·9			
24	3 1 30·90	0·56	0·12	16 49 27·7			
25	3 1 44·38	0·56	0·12	16 50 24·3			
26	3 1 57·82	0·56	0·12	16 51 20·5			
27	3 2 11·21	0·56	0·12	16 52 16·5			
28	3 2 24·55	0·55	0·12	16 53 12			
29	3 2 37·83	0·55	0·12	16 54			
30	3 2 51·06	0·55	0·12	16 55			
31	3 3 4·23	0·55	0·12	16 55			
32	3 3 17·34	+ 0·54	0·12	N.16 56			

JUNE, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 3 5·10	N.16 56 1·0	1·3131780	22 22·0	47 1 39·1	S.0 20 34·5	1·2929
2	3 3 18·23	16 56 55·6	·3130412	22 18·3	47 2 19·6	0 20 34·0	·2929
3	3 3 31·30	16 57 49·8	·3128991	22 14·6	47 3 0·1	0 20 33·5	·2929
4	3 3 44·31	16 58 43·7	·3127518	22 10·8	47 3 40·6	0 20 33·0	·2929
5	3 3 57·24	16 59 37·2	·3125993	22 7·1	47 4 21·2	0 20 32·5	·2929
6	3 4 10·11	17 0 30·3	·3124417	22 3·4	47 5 1·7	0 20 32·0	·2929
7	3 4 22·90	17 1 23·1	·3122789	21 59·7	47 5 42·2	0 20 31·5	·2929
8	3 4 35·61	17 2 15·5	·3121110	21 56·0	47 6 22·7	0 20 31·0	·2929
9	3 4 48·25	17 3 7·5	·3119381	21 52·2	47 7 3·3	0 20 30·5	·2929
10	3 5 0·80	17 3 59·1	·3117601	21 48·5	47 7 43·8	0 20 30·0	·2929
11	3 5 13·27	17 4 50·3	·3115771	21 44·8	47 8 24·3	0 20 29·6	·2929
12	3 5 25·66	17 5 41·0	·3113892	21 41·1	47 9 4·9	0 20 29·1	·2929
13	3 5 37·95	17 6 31·3	·3111963	21 37·3	47 9 45·4	0 20 28·6	·2929
14	3 5 50·15	17 7 21·2	·3109985	21 33·6	47 10 25·9	0 20 28·1	·2929
15	3 6 2·25	17 8 10·6	·3107959	21 29·9	47 11 6·4	0 20 27·6	·2929
16	3 6 14·26	17 8 59·6	·3105885	21 26·1	47 11 47·0	0 20 27·1	·2929
17	3 6 26·16	17 9 48·0	·3103763	21 22·4	47 12 27·5	0 20 26·6	·2929
18	3 6 37·96	17 10 36·0	·3101594	21 18·7	47 13 8·1	0 20 26·1	·2929
19	3 6 49·66	17 11 23·5	·3099378	21 14·9	47 13 48·6	0 20 25·6	·2929
20	3 7 1·25	17 12 10·5	·3097116	21 11·2	47 14 29·1	0 20 25·1	·2929
21	3 7 12·73	17 12 56·9	·3094809	21 7·4	47 15 9·7	0 20 24·7	·2928
22	3 7 24·10	17 13 42·8	·3092458	21 3·7	47 15 50·2	0 20 24·2	·2928
23	3 7 35·35	17 14 28·2	·3090062	20 59·9	47 16 30·8	0 20 23·7	·2928
24	3 7 46·49	17 15 13·1	·3087622	20 56·2	47 17 11·3	0 20 23·2	·2928
25	3 7 57·51	17 15 57·4	·3085139	20 52·4	47 17 51·9	0 20 22·7	·2928
26	3 8 8·41	17 16 41·2	·3082613	20 48·7	47 18 32·4	0 20 22·2	·2928
27	3 8 19·19	17 17 24·5	·3080045	20 44·9	47 19 12·9	0 20 21·7	·2928
28	3 8 29·84	17 18 7·2	·3077436	20 41·2	47 19 53·5	0 20 21·2	·2928
29	3 8 40·36	17 18 49·4	·3074786	20 37·4	47 20 34·0	0 20 20·7	·2928
30	3 8 50·75	17 19 31·0	·3072096	20 33·7	47 21 14·6	0 20 20·2	·2928
31	3 9 1·01	N.17 20 12·0	1·3069366	20 29·9	47 21 55·1	S.0 20 19·7	1·2928

JUNE, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	3 3 17·34	+ 0·54	0·12	N.16 56 51·9	+ 2·3	1·8	0·4
2	3 3 30·38	0·54	0·12	16 57 46·0	2·2	1·8	0·4
3	3 3 43·35	0·54	0·12	16 58 39·8	2·2	1·8	0·4
4	3 3 56·26	0·54	0·12	16 59 33·2	2·2	1·8	0·4
5	3 4 9·10	0·53	0·13	17 0 26·2	2·2	1·8	0·4
6	3 4 21·86	0·53	0·13	17 1 18·9	2·2	1·8	0·4
7	3 4 34·55	0·53	0·13	17 2 11·1	2·2	1·8	0·4
8	3 4 47·16	0·52	0·13	17 3 3·0	2·2	1·8	0·4
9	3 4 59·69	0·52	0·13	17 3 54·5	2·1	1·8	0·4
10	3 5 12·14	0·52	0·13	17 4 45·6	2·1	1·8	0·4
11	3 5 24·50	0·51	0·13	17 5 36·3	2·1	1·8	0·4
12	3 5 36·77	0·51	0·13	17 6 26·5	2·1	1·8	0·4
13	3 5 48·95	0·51	0·13	17 7 16·3	2·1	1·8	0·4
14	3 6 1·03	0·50	0·13	17 8 5·6	2·0	1·8	0·4
15	3 6 13·01	0·50	0·13	17 8 54·5	2·0	1·8	0·4
16	3 6 24·90	0·49	0·13	17 9 42·9	2·0	1·8	0·4
17	3 6 36·68	0·49	0·13	17 10 30·8	2·0	1·8	0·4
18	3 6 48·36	0·48	0·13	17 11 18·2	2·0	1·8	0·4
19	3 6 59·93	0·48	0·13	17 12 5·1	1·9	1·8	0·4
20	3 7 11·39	0·47	0·13	17 12 51·5	1·9	1·8	0·4
21	3 7 22·74	0·47	0·13	17 13 37·4	1·9	1·8	0·4
22	3 7 33·98	0·47	0·13	17 14 22·7	1·9	1·8	0·4
23	3 7 45·11	0·46	0·13	17 15 7·5	1·9	1·8	
24	3 7 56·11	0·46	0·13	17 15 51·8	1·8	1·8	
25	3 8 7·00	0·45	0·13	17 16 35·5	1·8		
26	3 8 17·76	0·45	0·13	17 17 18·8	1·8		
27	3 8 28·40	0·44	0·13	17 18 1·5	1·8		
28	3 8 38·91	0·44	0·13	17 18 43·6	1·7		
29	3 8 49·30	0·43	0·13	17 19 25·1	1·7		
30	3 8 59·55	0·42	0·13	17 20 6·1	1·7		
31	3 9 9·67	+ 0·42	0·13	N.17 20 46·6	+ 1·7		

JULY, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*No*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 9 1·01	N. 17 20 12·0	1·3069366	20 29·9	47 21 55·1	S. 0 20 19·7	1·29
2	3 9 11·14	17 20 52·4	·3066597	20 26·1	47 22 35·7	0 20 19·2	·29
3	3 9 21·13	17 21 32·2	·3063789	20 22·4	47 23 16·2	0 20 18·8	·29
4	3 9 30·99	17 22 11·4	·3060942	20 18·6	47 23 56·8	0 20 18·3	·29
5	3 9 40·71	17 22 50·1	·3058058	20 14·8	47 24 37·3	0 20 17·8	·29
6	3 9 50·28	17 23 28·1	·3055137	20 11·0	47 25 17·9	0 20 17·3	·29
7	3 9 59·71	17 24 5·4	·3052180	20 7·3	47 25 58·4	0 20 16·8	·29
8	3 10 8·99	17 24 42·2	·3049186	20 3·5	47 26 39·0	0 20 16·3	·29
9	3 10 18·13	17 25 18·3	·3046157	19 59·7	47 27 19·5	0 20 15·8	·29
10	3 10 27·11	17 25 53·8	·3043093	19 55·9	47 28 0·0	0 20 15·3	·29
11	3 10 35·94	17 26 28·7	·3039994	19 52·1	47 28 40·6	0 20 14·8	·29
12	3 10 44·62	17 27 2·9	·3036863	19 48·4	47 29 21·1	0 20 14·3	·29
13	3 10 53·14	17 27 36·4	·3033699	19 44·6	47 30 1·7	0 20 13·8	·29
14	3 11 1·50	17 28 9·3	·3030503	19 40·8	47 30 42·2	0 20 13·3	·29
15	3 11 9·70	17 28 41·5	·3027277	19 37·0	47 31 22·8	0 20 12·8	·29
16	3 11 17·74	17 29 13·0	·3024021	19 33·2	47 32 3·3	0 20 12·3	·29
17	3 11 25·61	17 29 43·8	·3020736	19 29·3	47 32 43·9	0 20 11·8	·29
18	3 11 33·32	17 30 13·9	·3017422	19 25·5	47 33 24·4	0 20 11·4	·29
19	3 11 40·86	17 30 43·4	·3014080	19 21·7	47 34 5·0	0 20 10·9	·29
20	3 11 48·22	17 31 12·1	·3010712	19 17·9	47 34 45·5	0 20 10·4	·29
21	3 11 55·41	17 31 40·1	·3007318	19 14·1	47 35 26·1	0 20 9·9	·29
22	3 12 2·43	17 32 7·4	·3003899	19 10·3	47 36 6·6	0 20 9·4	·29
23	3 12 9·28	17 32 34·0	·3000456	19 6·5	47 36 47·2	0 20 8·9	·29
24	3 12 15·95	17 32 59·9	·2996990	19 2·6	47 37 27·7	0 20 8·4	·29
25	3 12 22·44	17 33 25·1	·2993501	18 58·8	47 38 8·3	0 20 7·9	·29
26	3 12 28·75	17 33 49·5	·2989990	18 55·0	47 38 48·8	0 20 7·4	·29
27	3 12 34·88	17 34 13·2	·2986459	18 51·2	47 39 29·3	0 20 6·9	·29
28	3 12 40·84	17 34 36·1	·2982908	18 47·3	47 40 9·9	0 20 6·4	·29
29	3 12 46·61	17 34 58·3	·2979338	18 43·5	47 40 50·4	0 20 5·9	·29
30	3 12 52·19	17 35 19·8	·2975749	18 39·6	47 41 31·0	0 20 5·4	·29
31	3 12 57·59	17 35 40·6	·2972143	18 35·8	47 42 11·5	0 20 4·9	·29
32	3 13 2·81	N. 17 36 0·6	1·2968521	18 31·9	47 42 52·0	S. 0 20 4·4	1·29

JULY, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
3 9 9·67	+ 0·42	0·13	N.17 20 46·6	+ 1·7	1·8	0·4
3 9 19·66	0·41	0·13	17 21 26·4	1·6	1·8	0·4
3 9 29·51	0·41	0·13	17 22 5·6	1·6	1·8	0·4
3 9 39·22	0·40	0·13	17 22 44·2	1·6	1·8	0·4
3 9 48·79	0·40	0·13	17 23 22·2	1·6	1·8	0·4
3 9 58·22	0·39	0·13	17 23 59·5	1·5	1·8	0·4
3 10 7·50	0·38	0·13	17 24 36·3	1·5	1·8	0·4
3 10 16·64	0·38	0·13	17 25 12·4	1·5	1·8	0·4
3 10 25·62	0·37	0·13	17 25 47·9	1·5	1·8	0·4
3 10 34·46	0·36	0·13	17 26 22·8	1·4	1·8	0·4
3 10 43·14	0·36	0·13	17 26 57·0	1·4	1·9	0·4
3 10 51·66	0·35	0·13	17 27 30·6	1·4	1·9	0·4
3 11 0·03	0·35	0·13	17 28 3·5	1·4	1·9	0·4
3 11 8·24	0·34	0·13	17 28 35·7	1·3	1·9	0·4
3 11 16·28	0·33	0·13	17 29 7·3	1·3	1·9	0·4
3 11 24·16	0·33	0·13	17 29 38·1	1·3	1·9	0·4
3 11 31·88	0·32	0·13	17 30 8·3	1·2	1·9	0·4
3 11 39·43	0·31	0·13	17 30 37·8	1·2	1·9	0·4
3 11 46·81	0·30	0·13	17 31 6·6	1·2	1·9	0·4
3 11 54·02	0·30	0·13	17 31 34·7	1·2	1·9	0·4
3 12 1·06	0·29	0·13	17 32 2·1	1·1	1·9	0·4
3 12 7·92	0·28	0·13	17 32 28·8	1·1	1·9	0·4
3 12 14·60	0·27	0·13	17 32 54·7	1·1	1·9	0·4
3 12 21·11	0·27	0·13	17 33 20·0	1·0	1·9	0·4
3 12 27·45	0·26	0·13	17 33 44·5	1·0	1·9	0·4
3 12 33·60	0·25	0·13	17 34 8·2	1·0	1·9	
3 12 39·57	0·25	0·13	17 34 31·3	0·9	1·9	
3 12 45·37	0·24	0·13	17 34 53·6	0·9		
3 12 50·98	0·23	0·13	17 35 15·2	0·9		
3 12 56·41	0·22	0·13	17 35 36·0	0·9		
3 13 1·65	0·21	0·13	17 35 56·2	0·8		
3 13 6·71	+ 0·21	0·13	N.17 36 15·6	+ 0·8		

AUGUST, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Lo Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	N
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 13 2·81	N.17 36 0·6	1·2968521	18 31·9	47 42 52·0	S.0 20 4·4	1·29
2	3 13 7·84	17 36 19·9	·2964882	18 28·1	47 43 32·6	0 20 4·0	·29
3	3 13 12·68	17 36 38·4	·2961228	18 24·2	47 44 13·1	0 20 3·5	·29
4	3 13 17·34	17 36 56·2	·2957560	18 20·4	47 44 53·7	0 20 3·0	·29
5	3 13 21·80	17 37 13·2	·2953878	18 16·5	47 45 34·2	0 20 2·5	·29
6	3 13 26·07	17 37 29·4	·2950184	18 12·6	47 46 14·7	0 20 2·0	·29
7	3 13 30·14	17 37 44·9	·2946479	18 8·8	47 46 55·3	0 20 1·5	·29
8	3 13 34·02	17 37 59·6	·2942764	18 4·9	47 47 35·8	0 20 1·0	·29
9	3 13 37·70	17 38 13·5	·2939039	18 1·0	47 48 16·4	0 20 0·5	·29
10	3 13 41·18	17 38 26·6	·2935306	17 57·2	47 48 56·9	0 20 0·0	·29
11	3 13 44·46	17 38 38·9	·2931566	17 53·3	47 49 37·4	0 19 59·5	·29
12	3 13 47·55	17 38 50·4	·2927820	17 49·4	47 50 18·0	0 19 59·0	·29
13	3 13 50·43	17 39 1·2	·2924068	17 45·5	47 50 58·5	0 19 58·5	·29
14	3 13 53·11	17 39 11·2	·2920313	17 41·6	47 51 39·0	0 19 58·0	·29
15	3 13 55·60	17 39 20·4	·2916554	17 37·7	47 52 19·6	0 19 57·5	·29
16	3 13 57·88	17 39 28·8	·2912794	17 33·8	47 53 0·1	0 19 57·0	·29
17	3 13 59·96	17 39 36·4	·2909033	17 29·9	47 53 40·6	0 19 56·6	·29
18	3 14 1·83	17 39 43·2	·2905273	17 26·0	47 54 21·2	0 19 56·1	·29
19	3 14 3·50	17 39 49·2	·2901514	17 22·1	47 55 1·7	0 19 55·6	·29
20	3 14 4·97	17 39 54·4	·2897758	17 18·2	47 55 42·2	0 19 55·1	·29
21	3 14 6·24	17 39 58·8	·2894005	17 14·3	47 56 22·8	0 19 54·6	·29
22	3 14 7·30	17 40 2·4	·2890258	17 10·4	47 57 3·3	0 19 54·1	·29
23	3 14 8·16	17 40 5·2	·2886516	17 6·5	47 57 43·8	0 19 53·6	·29
24	3 14 8·82	17 40 7·2	·2882781	17 2·5	47 58 24·4	0 19 53·1	·29
25	3 14 9·27	17 40 8·4	·2879054	16 58·6	47 59 4·9	0 19 52·6	·29
26	3 14 9·52	17 40 8·8	·2875336	16 54·7	47 59 45·4	0 19 52·1	·29
27	3 14 9·57	17 40 8·5	·2871628	16 50·7	48 0 25·9	0 19 51·6	·29
28	3 14 9·41	17 40 7·3	·2867931	16 46·8	48 1 6·5	0 19 51·1	·29
29	3 14 9·05	17 40 5·4	·2864246	16 42·9	48 1 47·0	0 19 50·6	·29
30	3 14 8·49	17 40 2·7	·2860574	16 38·9	48 2 27·5	0 19 50·1	·29
31	3 14 7·73	17 39 59·2	·2856917	16 35·0	48 3 8·0	0 19 49·6	·29
32	3 14 6·77	N.17 39 54·9	1·2853274	16 31·0	48 3 48·5	S.0 19 49·1	1·29

AUGUST, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
3 13 6·71	+ 0·21	0·13	N.17 36 15·6	+ 0·8	1·9	0·4
3 13 11·59	0·20	0·13	17 36 34·2	0·8	1·9	0·4
3 13 16·27	0·19	0·13	17 36 52·1	0·7	1·9	0·4
3 13 20·76	0·18	0·13	17 37 9·2	0·7	1·9	0·4
3 13 25·07	0·18	0·13	17 37 25·6	0·7	1·9	0·4
3 13 29·18	0·17	0·13	17 37 41·2	0·6	1·9	0·4
3 13 33·09	0·16	0·13	17 37 56·1	0·6	1·9	0·4
3 13 36·81	0·15	0·13	17 38 10·1	0·6	1·9	0·4
3 13 40·33	0·14	0·13	17 38 23·4	0·5	1·9	0·4
3 13 43·66	0·13	0·13	17 38 35·9	0·5	1·9	0·4
3 13 46·78	0·13	0·13	17 38 47·6	0·5	1·9	0·4
3 13 49·71	0·12	0·13	17 38 58·5	0·4	1·9	0·4
3 13 52·44	0·11	0·13	17 39 8·7	0·4	1·9	0·4
3 13 54·96	0·10	0·13	17 39 18·0	0·4	1·9	0·4
3 13 57·29	0·09	0·13	17 39 26·6	0·3	1·9	0·4
3 13 59·42	0·08	0·13	17 39 34·4	0·3	1·9	0·4
3 14 1·34	0·08	0·13	17 39 41·4	0·3	1·9	0·4
3 14 3·06	0·07	0·13	17 39 47·6	0·2	1·9	0·4
3 14 4·58	0·06	0·13	17 39 53·0	0·2	1·9	0·4
3 14 5·90	0·05	0·13	17 39 57·6	0·2	1·9	0·4
3 14 7·02	0·04	0·13	17 40 1·5	0·1	1·9	0·4
3 14 7·94	0·03	0·13	17 40 4·5	0·1	1·9	0·4
3 14 8·65	0·03	0·13	17 40 6·7	+ 0·1	1·9	0·4
3 14 9·16	0·02	0·13	17 40 8·1	0·0	1·9	0·4
3 14 9·47	+ 0·01	0·13	17 40 8·8	0·0		
3 14 9·58	0·00	0·13	17 40 8·7	0·0		
3 14 9·48	− 0·01	0·13	17 40 7·8	− 0·1		
3 14 9·18	0·02	0·13	17 40 6·1	0·1		
3 14 8·68	0·03	0·13	17 40 3·6	0·1		
3 14 7·98	0·03	0·13	17 40 0·3	0·2		
3 14 7·09	0·04	0·13	17 39 56·3	0·2		
3 14 5·99	− 0·05	0·13	N.17 39 51·5	− 0·		

SEPTEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. of Rad. Vec.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noon.*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 14 6·77	N. 17 39 54·9	1·2853274	16 31·0	48 3 48·5	S. 0 19 49·1	1·29265
2	3 14 5·60	17 39 49·8	·2849647	16 27·1	48 4 29·1	0 19 48·6	·29265
3	3 14 4·23	17 39 43·9	·2846038	16 23·1	48 5 9·6	0 19 48·1	·29264
4	3 14 2·67	17 39 37·3	·2842447	16 19·2	48 5 50·1	0 19 47·6	·29264
5	3 14 0·90	17 39 29·9	·2838875	16 15·2	48 6 30·6	0 19 47·1	·29264
6	3 13 58·93	17 39 21·7	·2835324	16 11·3	48 7 11·2	0 19 46·7	·29263
7	3 13 56·76	17 39 12·7	·2831795	16 7·3	48 7 51·7	0 19 46·2	·29263
8	3 13 54·39	17 39 3·0	·2828290	16 3·3	48 8 32·2	0 19 45·7	·29263
9	3 13 51·83	17 38 52·5	·2824809	15 59·3	48 9 12·7	0 19 45·2	·29262
10	3 13 49·07	17 38 41·3	·2821354	15 55·4	48 9 53·2	0 19 44·7	·29262
11	3 13 46·11	17 38 29·3	·2817925	15 51·4	48 10 33·8	0 19 44·2	·29262
12	3 13 42·95	17 38 16·5	·2814525	15 47·4	48 11 14·3	0 19 43·7	·29262
13	3 13 39·60	17 38 3·0	·2811154	15 43·4	48 11 54·8	0 19 43·2	·29262
14	3 13 36·06	17 37 48·7	·2807814	15 39·4	48 12 35·3	0 19 42·7	·29262
15	3 13 32·32	17 37 33·6	·2804505	15 35·4	48 13 15·9	0 19 42·2	·29262
16	3 13 28·40	17 37 17·8	·2801229	15 31·4	48 13 56·4	0 19 41·7	·29262
17	3 13 24·29	17 37 1·3	·2797987	15 27·4	48 14 36·9	0 19 41·2	·29259
18	3 13 20·00	17 36 44·1	·2794780	15 23·4	48 15 17·4	0 19 40·7	·29259
19	3 13 15·52	17 36 26·2	·2791608	15 19·4	48 15 58·0	0 19 40·2	·29259
20	3 13 10·87	17 36 7·5	·2788473	15 15·4	48 16 38·5	0 19 39·7	·29258
21	3 13 6·03	17 35 48·1	·2785376	15 11·4	48 17 19·0	0 19 39·2	·29258
22	3 13 1·02	17 35 28·1	·2782317	15 7·3	48 17 59·6	0 19 38·7	·29258
23	3 12 55·83	17 35 7·4	·2779299	15 3·3	48 18 40·1	0 19 38·2	·29257
24	3 12 50·47	17 34 46·0	·2776322	14 59·3	48 19 20·6	0 19 37·7	·29257
25	3 12 44·94	17 34 23·9	·2773387	14 55·3	48 20 1·1	0 19 37·2	·29257
26	3 12 39·24	17 34 1·2	·2770495	14 51·3	48 20 41·7	0 19 36·7	·29256
27	3 12 33·37	17 33 37·8	·2767647	14 47·2	48 21 22·2	0 19 36·2	·29256
28	3 12 27·34	17 33 13·7	·2764845	14 43·2	48 22 2·7	0 19 35·7	·29256
29	3 12 21·14	17 32 49·0	·2762089	14 39·2	48 22 43·3	0 19 35·2	·29256
30	3 12 14·78	17 32 23·7	·2759380	14 35·1	48 23 23·8	0 19 34·7	·29256
31	3 12 8·26	N. 17 31 57·7	1·2756718	14 31·1	48 24 4·3	S. 0 19 34·2	1·29256

SEPTEMBER, 1855.

At Transit over the Meridian of Greenwich.

Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	3 14 5·99	— 0·05	0·13	N.17 39 51·5	— 0·2	1·9	0·4
2	3 14 4·69	0·06	0·13	17 39 45·9	0·3	1·9	0·4
3	3 14 3·19	0·07	0·13	17 39 39·5	0·3	1·9	0·4
4	3 14 1·49	0·08	0·13	17 39 32·4	0·3	1·9	0·4
5	3 13 59·59	0·08	0·13	17 39 24·5	0·3	1·9	0·4
6	3 13 57·49	0·09	0·13	17 39 15·8	0·4	1·9	0·4
7	3 13 55·20	0·10	0·13	17 39 6·3	0·4	1·9	0·4
8	3 13 52·70	0·11	0·13	17 38 56·1	0·4	1·9	0·4
9	3 13 50·01	0·12	0·13	17 38 45·1	0·5	1·9	0·4
10	3 13 47·12	0·12	0·13	17 38 33·4	0·5	1·9	0·4
11	3 13 44·04	0·13	0·13	17 38 20·9	0·5	1·9	0·4
12	3 13 40·77	0·14	0·13	17 38 7·7	0·6	1·9	0·4
13	3 13 37·30	0·15	0·13	17 37 53·7	0·6	1·9	0·4
14	3 13 33·64	0·16	0·14	17 37 38·9	0·6	2·0	0·4
15	3 13 29·79	0·16	0·14	17 37 23·4	0·7	2·0	0·4
16	3 13 25·76	0·17	0·14	17 37 7·2	0·7	2·0	0·5
17	3 13 21·55	0·18	0·14	17 36 50·3	0·7	2·0	0·5
18	3 13 17·15	0·19	0·14	17 36 32·7	0·8	2·0	0·5
19	3 13 12·57	0·19	0·14	17 36 14·3	0·8	2·0	0·5
20	3 13 7·81	0·20	0·14	17 35 55·3	0·8	2·0	0·5
21	3 13 2·88	0·21	0·14	17 35 35·6	0·8	2·0	0·5
22	3 12 57·77	0·21	0·14	17 35 15·2	0·9	2·0	0·5
23	3 12 52·49	0·22	0·14	17 34 54·1	0·9	2·0	0·5
24	3 12 47·03	0·23	0·14	17 34 32·3	0·9	2·0	
25	3 12 41·41	0·24	0·14	17 34 9·9	0·9	2·0	
26	3 12 35·62	0·24	0·14	17 33 46·8	1·0	2·	
27	3 12 29·67	0·25	0·14	17 33 23·0	1·0	2	
28	3 12 23·55	0·26	0·14	17 32 58·6	1·0		
29	3 12 17·28	0·27	0·14	17 32 33·6	1·1		
30	3 12 10·84	0·27	0·14	17 32 8·0	1·1		
31	3 12 4·25	— 0·28	0·14	N.17 31 41·7	— 1·1		

OCTOBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	No
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 12 8·26	N.17 31 57·7	1·2756718	14 31·1	48 24 4·3	S.0 19 34·2	1·29
2	3 12 1·59	17 31 31·1	·2754106	14 27·0	48 24 44·9	0 19 33·7	·29
3	3 11 54·76	17 31 3·9	·2751543	14 23·0	48 25 25·4	0 19 33·2	·29
4	3 11 47·78	17 30 36·1	·2749031	14 18·9	48 26 5·9	0 19 32·7	·29
5	3 11 40·66	17 30 7·7	·2746571	14 14·9	48 26 46·5	0 19 32·2	·29
6	3 11 33·39	17 29 38·8	·2744164	14 10·8	48 27 27·0	0 19 31·7	·29
7	3 11 25·98	17 29 9·3	·2741811	14 6·8	48 28 7·6	0 19 31·2	·29
8	3 11 18·43	17 28 39·3	·2739513	14 2·7	48 28 48·1	0 19 30·7	·29
9	3 11 10·74	17 28 8·7	·2737270	13 58·6	48 29 28·7	0 19 30·2	·29
10	3 11 2·92	17 27 37·6	·2735084	13 54·6	48 30 9·2	0 19 29·7	·29
11	3 10 54·97	17 27 5·9	·2732956	13 50·5	48 30 49·8	0 19 29·2	·29
12	3 10 46·89	17 26 33·7	·2730886	13 46·5	48 31 30·3	0 19 28·7	·29
13	3 10 38·69	17 26 1·0	·2728876	13 42·4	48 32 10·9	0 19 28·2	·29
14	3 10 30·37	17 25 27·8	·2726927	13 38·3	48 32 51·4	0 19 27·7	·29
15	3 10 21·93	17 24 54·1	·2725038	13 34·2	48 33 32·0	0 19 27·2	·29
16	3 10 13·38	17 24 20·0	·2723212	13 30·2	48 34 12·5	0 19 26·7	·29
17	3 10 4·73	17 23 45·4	·2721448	13 26·1	48 34 53·1	0 19 26·2	·29
18	3 9 55·97	17 23 10·4	·2719748	13 22·0	48 35 33·6	0 19 25·7	·29
19	3 9 47·11	17 22 35·0	·2718111	13 17·9	48 36 14·2	0 19 25·2	·29
20	3 9 38·16	17 21 59·2	·2716538	13 13·9	48 36 54·8	0 19 24·7	·29
21	3 9 29·12	17 21 23·1	·2715030	13 9·8	48 37 35·3	0 19 24·2	·29
22	3 9 19·99	17 20 46·6	·2713587	13 5·7	48 38 15·9	0 19 23·7	·29
23	3 9 10·77	17 20 9·8	·2712211	13 1·6	48 38 56·4	0 19 23·2	·29
24	3 9 1·47	17 19 32·6	·2710902	12 57·5	48 39 37·0	0 19 22·7	·29
25	3 8 52·10	17 18 55·1	·2709659	12 53·4	48 40 17·6	0 19 22·2	·29
26	3 8 42·65	17 18 17·3	·2708483	12 49·3	48 40 58·2	0 19 21·7	·29
27	3 8 33·13	17 17 39·2	·2707375	12 45·2	48 41 38·7	0 19 21·2	·29
28	3 8 23·54	17 17 0·8	·2706336	12 41·2	48 42 19·3	0 19 20·7	·29
29	3 8 13·90	17 16 22·1	·2705366	12 37·1	48 42 59·9	0 19 20·2	·29
30	3 8 4·19	17 15 43·2	·2704465	12 33·0	48 43 40·5	0 19 19·7	·29
31	3 7 54·43	17 15 4·1	·2703634	12 28·9	48 44 21·1	0 19 19·2	·29
32	3 7 44·62	N.17 14 24·7	1·2702873	12 24·8	48 45 1·7	S.0 19 18·7	1·29

OCTOBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
3 12 4·25	— 0·28	0·14	N.17 31 41·7	— 1·1	2·0	0·5
3 11 57·50	0·28	0·14	17 31 14·8	1·1	2·0	0·5
3 11 50·60	0·29	0·14	17 30 47·3	1·2	2·0	0·5
3 11 43·55	0·30	0·14	17 30 19·2	1·2	2·0	0·5
3 11 36·36	0·30	0·14	17 29 50·6	1·2	2·0	0·5
3 11 29·03	0·31	0·14	17 29 21·4	1·2	2·0	0·5
3 11 21·56	0·31	0·14	17 28 51·7	1·3	2·0	0·5
3 11 13·95	0·32	0·14	17 28 21·4	1·3	2·0	0·5
3 11 6·20	0·33	0·14	17 27 50·6	1·3	2·0	0·5
3 10 58·33	0·33	0·14	17 27 19·3	1·3	2·0	0·5
3 10 50·33	0·34	0·14	17 26 47·4	1·3	2·0	0·5
3 10 42·20	0·34	0·14	17 26 15·0	1·4	2·0	0·5
3 10 33·95	0·35	0·14	17 25 42·1	1·4	2·0	0·5
3 10 25·59	0·35	0·14	17 25 8·7	1·4	2·0	0·5
3 10 17·11	0·36	0·14	17 24 34·9	1·4	2·0	0·5
3 10 8·53	0·36	0·14	17 24 0·6	1·4	2·0	0·5
3 9 59·84	0·36	0·14	17 23 25·9	1·5	2·0	0·5
3 9 51·05	0·37	0·14	17 22 50·8	1·5	2·0	0·5
3 9 42·17	0·37	0·14	17 22 15·3	1·5	2·0	0·5
3 9 33·19	0·38	0·14	17 21 39·4	1·5	2·0	0·5
3 9 24·12	0·38	0·14	17 21 3·2	1·5	2·0	0·5
3 9 14·97	0·38	0·14	17 20 26·6	1·5	2·0	0·5
3 9 5·73	0·39	0·14	17 19 49·7	1·5		5
3 8 56·42	0·39	0·14	17 19 12·4	1·6		5
3 8 47·03	0·39	0·14	17 18 34·8	1·6		
3 8 37·57	0·40	0·14	17 17 57·0	1		
3 8 28·04	0·40	0·14	17 17 18·8	1		
3 8 18·45	0·40	0·14	17 16 40·4			
3 8 8·80	0·40	0·14	17 16 1·7			
3 7 59·09	0·41	0·14	17 15 22·8			
3 7 49·34	0·41	0·14	17 14 43·6			
3 7 39·53	— 0·41	0·14	N.17 14 4·2	—		

NOVEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log Rad.
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	No
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 7 44·62	N.17 14 24·7	1·2702873	12 24·8	48 45 1·7	S.0 19 18·7	1·29
2	3 7 34·76	17 13 45·1	·2702182	12 20·7	48 45 42·2	0 19 18·2	·29
3	3 7 24·86	17 13 5·4	·2701562	12 16·6	48 46 22·8	0 19 17·7	·29
4	3 7 14·93	17 12 25·5	·2701014	12 12·5	48 47 3·4	0 19 17·2	·29
5	3 7 4·96	17 11 45·4	·2700538	12 8·4	48 47 44·0	0 19 16·7	·29
6	3 6 54·97	17 11 5·2	·2700134	12 4·3	48 48 24·6	0 19 16·2	·29
7	3 6 44·95	17 10 24·9	·2699802	12 0·2	48 49 5·2	0 19 15·7	·29
8	3 6 34·91	17 9 44·5	·2699542	11 56·1	48 49 45·8	0 19 15·2	·29
9	3 6 24·86	17 9 4·1	·2699355	11 52·0	48 50 26·5	0 19 14·7	·29
10	3 6 14·80	17 8 23·6	·2699241	11 47·9	48 51 7·1	0 19 14·2	·29
11	3 6 4·74	17 7 43·0	·2699201	11 43·8	48 51 47·7	0 19 13·7	·29
12	3 5 54·67	17 7 2·4	·2699233	11 39·7	48 52 28·3	0 19 13·2	·29
13	3 5 44·61	17 6 21·8	·2699338	11 35·6	48 53 8·9	0 19 12·7	·29
14	3 5 34·56	17 5 41·3	·2699516	11 31·5	48 53 49·5	0 19 12·2	·29
15	3 5 24·52	17 5 0·8	·2699766	11 27·4	48 54 30·1	0 19 11·7	·29
16	3 5 14·50	17 4 20·4	·2700090	11 23·3	48 55 10·7	0 19 11·2	·29
17	3 5 4·50	17 3 40·0	·2700486	11 19·2	48 55 51·4	0 19 10·7	·29
18	3 4 54·53	17 2 59·7	·2700954	11 15·1	48 56 32·0	0 19 10·2	·29
19	3 4 44·59	17 2 19·6	·2701493	11 11·0	48 57 12·6	0 19 9·7	·29
20	3 4 34·68	17 1 39·6	·2702105	11 6·9	48 57 53·2	0 19 9·2	·29
21	3 4 24·81	17 0 59·7	·2702788	11 2·8	48 58 33·9	0 19 8·7	·29
22	3 4 14·99	17 0 20·0	·2703542	10 58·7	48 59 14·5	0 19 8·2	·29
23	3 4 5·22	16 59 40·5	·2704368	10 54·7	48 59 55·1	0 19 7·7	·29
24	3 3 55·50	16 59 1·2	·2705264	10 50·6	49 0 35·8	0 19 7·2	·29
25	3 3 45·84	16 58 22·1	·2706230	10 46·5	49 1 16·4	0 19 6·7	·29
26	3 3 36·24	16 57 43·2	·2707266	10 42·4	49 1 57·1	0 19 6·2	·29
27	3 3 26·70	16 57 4·6	·2708372	10 38·3	49 2 37·7	0 19 5·7	·29
28	3 3 17·23	16 56 26·3	·2709547	10 34·2	49 3 18·4	0 19 5·2	·29
29	3 3 7·83	16 55 48·2	·2710791	10 30·1	49 3 59·0	0 19 4·7	·29
30	3 2 58·51	16 55 10·4	·2712103	10 26·0	49 4 39·7	0 19 4·2	·29
31	3 2 49·27	N.16 54 33·0	1·2713484	10 21·9	49 5 20·3	S.0 19 3·7	1·29

NOVEMBER, 1855.

At Transit over the Meridian of Greenwich.

Apparent Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
h m s	s	s	° ′ ″	″	″	″
3 7 39·53	— 0·41	0·14	N.17 14 4·2	— 1·6	2·0	0·5
3 7 29·68	0·41	0·14	17 13 24·7	1·7	2·0	0·5
3 7 19·79	0·41	0·14	17 12 45·0	1·7	2·0	0·5
3 7 9·86	0·41	0·14	17 12 5·1	1·7	2·0	0·5
3 6 59·91	0·42	0·14	17 11 25·1	1·7	2·0	0·5
3 6 49·93	0·42	0·14	17 10 45·0	1·7	2·0	0·5
3 6 39·93	0·42	0·14	17 10 4·7	1·7	2·0	0·5
3 6 29·91	0·42	0·14	17 9 24·4	1·7	2·0	0·5
3 6 19·89	0·42	0·14	17 8 44·0	1·7	2·0	0·5
3 6 9·86	0·42	0·14	17 8 3·6	1·7	2·0	0·5
3 5 59·82	0·42	0·14	17 7 23·2	1·7	2·0	0·5
3 5 49·78	0·42	0·14	17 6 42·7	1·7	2·0	0·5
3 5 39·75	0·42	0·14	17 6 2·3	1·7	2·0	0·5
3 5 29·73	0·42	0·14	17 5 21·9	1·7	2·0	0·5
3 5 19·73	0·42	0·14	17 4 41·5	1·7	2·0	0·5
3 5 9·75	0·42	0·14	17 4 1·2	1·7	2·0	0·5
3 4 59·79	0·42	0·14	17 3 21·0	1·7	2·0	0·5
3 4 49·86	0·41	0·14	17 2 40·9	1·7	2·0	0·5
3 4 39·97	0·41	0·14	17 2 0·9	1·7	2·0	0·5
3 4 30·11	0·41	0·14	17 1 21·1	1·7	2·0	0·5
3 4 20·29	0·41	0·14	17 0 41·4	1·6	2·0	0·5
3 4 10·52	0·41	0·14	17 0 1·9	1·6	2·0	0·5
3 4 0·80	0·40	0·14	16 59 22·6	1·6	2·0	0·5
3 3 51·13	0·40	0·14	16 58 43·5	1·6	2·0	0·5
3 3 41·52	0·40	0·14	16 58 4·6	1·6	2·	
3 3 31·97	0·40	0·14	16 57 26·0	1·6	2	
3 3 22·49	0·39	0·14	16 56 47·6	1·6		
3 3 13·08	0·39	0·14	16 56 9·5	1·6		
3 3 3·74	0·39	0·14	16 55 31·6	1·6		
3 2 54·48	0·38	0·14	16 54 54·1	1·6		
3 2 45·30	— 0·38	0·14	N.16 54 16·9	— 1·5		

DECEMBER, 1855.

MEAN TIME.

Day of the Month.	Geocentric.				Heliocentric.		
	Apparent Right Ascension.	*Apparent* Declination.	Log. of True Dist. from the Earth.	Meridian Passage.	Longitude.	Latitude.	Log. Rad. V
	Noon.	*Noon.*	*Noon.*		*Noon.*	*Noon.*	*Noo*
	h m s	° ′ ″		h m	° ′ ″	° ′ ″	
1	3 2 49·27	N.16 54 33·0	1·2713484	10 21·9	49 5 20·3	S.0 19 3·7	1·292
2	3 2 40·11	16 53 55·9	·2714932	10 17·9	49 6 1·0	0 19 3·2	·292
3	3 2 31·04	16 53 19·2	·2716447	10 13·8	49 6 41·6	0 19 2·7	·292
4	3 2 22·07	16 52 42·9	·2718029	10 9·7	49 7 22·3	0 19 2·2	·292
5	3 2 13·19	16 52 6·9	·2719677	10 5·6	49 8 3·0	0 19 1·7	·292
6	3 2 4·42	16 51 31·3	·2721391	10 1·5	49 8 43·6	0 19 1·2	·292
7	3 1 55·75	16 50 56·2	·2723169	9 57·5	49 9 24·3	0 19 0·7	·292
8	3 1 47·19	16 50 21·5	·272 011	9 53·4	49 10 5·0	0 19 0·2	·292
9	3 1 38·74	16 49 47·3	·2726917	9 49·3	49 10 45·6	0 18 59·7	·292
10	3 1 30·42	16 49 13·6	·2728885	9 45·3	49 11 26·3	0 18 59·2	·292
11	3 1 22·21	16 48 40·4	·2730916	9 41·2	49 12 7·0	0 18 58·7	·292
12	3 1 14·13	16 48 7·7	·2733007	9 37·1	49 12 47·6	0 18 58·2	·292
13	3 1 6·18	16 47 35·6	·2735158	9 33·1	49 13 28·3	0 18 57·7	·292
14	3 0 58·36	16 47 4·0	·2737369	9 29·0	49 14 9·0	0 18 57·2	·292
15	3 0 50·67	16 46 32·9	·2739638	9 24·9	49 14 49·7	0 18 56·7	·292
16	3 0 43·12	16 46 2·5	·2741964	9 20·9	49 15 30·3	0 18 56·2	·292
17	3 0 35·72	16 45 32·6	·2744347	9 16·8	49 16 11·0	0 18 55·7	·292
18	3 0 28·46	16 45 3·3	·2746785	9 12·8	49 16 51·7	0 18 55·2	·292
19	3 0 21·35	16 44 34·7	·2749277	9 8·7	49 17 32·4	0 18 54·7	·292
20	3 0 14·39	16 44 6·7	·2751823	9 4·7	49 18 13·1	0 18 54·2	·292
21	3 0 7·59	16 43 39·3	·2754421	9 0·6	49 18 53·7	0 18 53·7	·292
22	3 0 0·94	16 43 12·6	·2757071	8 56·6	49 19 34·4	0 18 53·2	·292
23	2 59 54·45	16 42 46·6	·2759772	8 52·6	49 20 15·1	0 18 52·7	·292
24	2 59 48·12	16 42 21·2	·2762522	8 48·5	49 20 55·8	0 18 52·2	·292
25	2 59 41·96	16 41 56·6	·2765321	8 44·5	49 21 36·5	0 18 51·7	·292
26	2 59 35·97	16 41 32·6	·2768167	8 40·5	49 22 17·1	0 18 51·2	·292
27	2 59 30·14	16 41 9·4	·2771060	8 36·4	49 22 57·8	0 18 50·7	·292
28	2 59 24·49	16 40 46·9	·2773998	8 32·4	49 23 38·5	0 18 50·2	·292
29	2 59 19·01	16 40 25·1	·2776981	8 28·4	49 24 19·2	0 18 49·7	·292
30	2 59 13·71	16 40 4·1	·2780008	8 24·4	49 24 59·9	0 18 49·2	·292
31	2 59 8·59	16 39 43·8	·2783077	8 20·4	49 25 40·6	0 18 48·7	·292
32	2 59 3·65	N.16 39 24·3	1·2786187	8 16·3	49 26 21·2	S.0 18 48·2	1·292

DECEMBER, 1855.

At Transit over the Meridian of Greenwich.

Day of the Month.	*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	Sid. Time of Sem. pass. Mer.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Semi-diameter.	Hor. Par.
	h m s	s	s	° ′ ″	″	″	″
1	3 2 45·30	— 0·38	0·14	N.16 54 16·9	— 1·5	2·0	0·5
2	3 2 36·21	0·38	0·14	16 53 40·1	1·5	2·0	0·5
3	3 2 27·21	0·37	0·14	16 53 3·7	1·5	2·0	0·5
4	3 2 18·30	0·37	0·14	16 52 27·6	1·5	2·0	0·5
5	3 2 9·49	0·37	0·14	16 51 51·9	1·5	2·0	0·5
6	3 2 0·78	0·36	0·14	16 51 16·6	1·5	2·0	0·5
7	3 1 52·18	0·36	0·14	16 50 41·8	1·4	2·0	0·5
8	3 1 43·69	0·35	0·14	16 50 7·4	1·4	2·0	0·5
9	3 1 35·32	0·35	0·14	16 49 33·5	1·4	2·0	0·5
10	3 1 27·06	0·34	0·14	16 49 0·1	1·4	2·0	0·5
11	3 1 18·93	0·34	0·14	16 48 27·2	1·4	2·0	0·5
12	3 1 10·93	0·33	0·14	16 47 54·8	1·3	2·0	0·5
13	3 1 3·05	0·33	0·14	16 47 22·9	1·3	2·0	0·5
14	3 0 55·30	0·32	0·14	16 46 51·6	1·3	2·0	0·5
15	3 0 47·69	0·31	0·14	16 46 20·9	1·3	2·0	0·5
16	3 0 40·22	0·31	0·14	16 45 50·7	1·2	2·0	0·5
17	3 0 32·90	0·30	0·14	16 45 21·2	1·2	2·0	0·5
18	3 0 25·72	0·30	0·14	16 44 52·3	1·2	2·0	0·5
19	3 0 18·68	0·29	0·14	16 44 24·0	1·2	2·0	0·5
20	3 0 11·80	0·28	0·14	16 43 56·3	1·1	2·0	0·5
21	3 0 5·07	0·28	0·14	16 43 29·2	1·1	2·0	0·5
22	2 59 58·50	0·27	0·14	16 43 2·8	1·1	2·0	0·5
23	2 59 52·09	0·26	0·14	16 42 37·1		2·0	0·5
24	2 59 45·84	0·26	0·14	16 42 12·1		0	0·5
25	2 59 39·76	0·25	0·14	16 41 47·8			
26	2 59 33·84	0·24	0·14	16 41 24			
27	2 59 28·09	0·24	0·14	16 41			
28	2 59 22·52	0·23	0·14	16 40			
29	2 59 17·12	0·22	0·14	16 4			
30	2 59 11·89	0·21	0·14	16 3			
31	2 59 6·85	0·21	0·14	16			
32	2 59 1·98	— 0·20	0·14	N.16			

MEAN PLACES OF 100 PRINCIPAL FIXED STARS, FOR JANUARY 1, 1855.

Star's Name.	Mag.	Right Ascension.	Annual Var.	Declination.	Annual Var.
		h m s	s	° ′ ″	″
α Andromedæ - -	2	0 0 53·973	+ 3·0839	N.28 17 23·14	+19·901
γ Pegasi (*Algenib*)	3.2	0 5 46·366	3·0811	N.14 22 38·00	20·031
β Hydri - - - -	3	0 18 3·620	3·2938	S. 78 4 18·16	20·253
α Cassiopeæ - - -	var.	0 32 18·330	3·3541	N.55 44 29·17	19·818
β Ceti - - - - -	2	0 36 18·470	+ 3·0130	S. 18 47 0·17	+19·823
α Urs. Min. (*Polaris*)	2	1 6 30·335	18·2116	N.88 32 11·37	19·217
θ^1 Ceti - - - - -	3	1 16 46·529	2·9962	S. 8 55 58·85	18·721
α Eridani(*Achernar*)	1	1 32 18·488	2·2368	S.57 58 27·95	18·439
α Arietis - - - -	2	1 59 0·444	+ 3·3633	N.22 46 28·23	+17·262
γ Ceti - - - - -	3.4	2 35 47·409	3·0999	N. 2 37 19·01	15·415
α Ceti - - - - -	2.3	2 54 42·152	3·1263	N. 3 31 4·46	14·393
α Persei - - - -	2	3 13 59·520	4·2409	N.49 20 26·82	13·239
η Tauri - - - -	3	3 38 52·286	+ 3·5497	N.23 39 10·88	+11·523
γ^1 Eridani - - - -	3	3 51 15·886	2·7939	S.13 55 26·96	10·565
α Tauri (*Aldebaran*)	1	4 27 36·272	3·4338	N.16 12 49·27	7·691
α Aurigæ (*Capella*)	1	5 5 59·039	4·4193	N.45 50 41·52	4·250
β Orionis (*Rigel*) -	1	5 7 34·234	+ 2·8801	S. 8 22 22·58	+ 4·526
β Tauri - - - -	2	5 17 7·720	3·7882	N.28 28 48·06	3·529
δ Orionis - - - -	2	5 24 36·024	3·0636	S. 0 24 37·83	3·045
α Leporis - - - -	3	5 26 20·174	2·6457	S.17 55 46·02	2·937
ε Orionis - - - -	2	5 28 51·404	+ 3·0410	S. 1 17 54·66	+ 2·700
α Columbæ - - -	2	5 34 24·057	2·1774	S.34 9 13·31	2·234
α Orionis - - - -	var.	5 47 19·352	3·2465	N. 7 22 32·58	+ 1·104
μ Geminorum - -	3	6 14 11·266	3·6323	N.22 34 59·86	− 1·371
α Argus - (*Canopus*)	1	6 20 44·130	+ 1·3301	S.52 37 4·66	− 1·813
51 (Hev.) Cephei - -	5	6 31 4·817	30·5276	N.87 15 8·04	2·815
α Canis Maj. (*Sirius*)	1	6 38 45·624	2·6463	S.16 31 15·12	4·602
ε Canis Majoris - -	2.1	6 52 55·664	2·3578	S.28 46 40·70	4·603
δ Geminorum - -	3.4	7 11 27·605	+ 3·5925	N.22 14 41·72	− 6·171
α^2 Geminor. (*Castor*)	2.1	7 25 20·513	3·8435	N.32 12 6·11	7·374
α Can.Min.(*Procyon*)	1	7 31 42·514	3·1450	N. 5 35 35·55	8·847
β Geminor. (*Pollux*)	1.2	7 36 26·225	3·6823	N.28 22 19·85	8·253
15 Argus - - - -	3	8 1 22·163	+ 2·5547	S.23 53 20·67	−10·066
ε Hydræ - - - -	3.4	8 39 5·673	3·1849	N. 6 56 52·06	12·870
ι Ursæ Majoris - -	3	8 49 15·480	4·1469	N.48 36 26·70	13·778
ι Argus - - - -	2	9 13 12·521	1·6019	S.58 40 3·30	14·905
α Hydræ - - - -	2	9 20 27·654	+ 2·9480	S. 8 1 56·91	−15·359
θ Ursæ Majoris - -	3	9 23 7·985	4·0603	N.52 20 6·71	16·101
ε Leonis - - - -	3	9 37 36·783	3·4215	N.24 26 22·33	16·328
α Leonis (*Regulus*)	1.2	10 0 38·723	+ 3·2027	N.12 40 26·35	−17·389

MEAN PLACES OF 100 PRINCIPAL FIXED STARS, FOR JANUARY 1, 1855.

Star's Name.	Mag.	Right Ascension.	Annual Var.	Declination.	Annual Var.
		h m s	s	° ′ ″	″
η Argus	2	10 39 26·746	+ 2·3061	S. 58 55 21·55	−18·739
α Ursæ Majoris	2	10 54 44·601	3·7777	N. 62 31 57·27	19·338
δ Leonis	2.3	11 6 23·467	3·2044	N. 21 19 2·35	19·655
δ Hydræ et Crateris	3.4	11 12 5·592	2·9940	S. 13 59 40·45	19·442
β Leonis	2	11 41 39·595	+ 3·0651	N. 15 22 56·79	−20·094
γ Ursæ Majoris	2.3	11 46 11·028	3·1960	N. 54 30 3·14	20·024
β Chamæleontis	5	12 9 56·056	3·3136	S. 78 30 25·32	20·046
α^1 Crucis	1	12 18 33·806	3·2550	S. 62 17 39·14	19·939
β Corvi	2.3	12 26 46·556	+ 3·1295	S. 22 35 40·10	−19·987
12 Canum Venaticor.	3	12 49 14·233	2·8184	N. 39 6 8·53	19·538
α Virginis (*Spica*)	1	13 17 33·498	3·1490	S. 10 24 11·31	18·957
η Ursæ Majoris	2	13 41 49·331	2·3744	N. 50 2 18·02	18·132
η Bootis	3	13 47 46·804	+ 2·8582	N. 19 7 34·37	−18·232
β Centauri	1	13 53 37·930	4·1493	S. 59 40 14·28	17·708
α Bootis (*Arcturus*)	1	14 9 2·897	2·7334	N. 19 56 21·20	18·937
α^2 Centauri	1	14 29 47·880	4·0236	S. 60 13 53·32	15·083
ε Bootis	2.3	14 38 39·217	+ 2·6194	N. 27 41 15·57	−15·434
α^2 Libræ	2.3	14 42 51·808	+ 3·3063	S. 15 26 11·09	15·260
β Ursæ Minoris	2	14 51 10·714	− 0·2644	N. 74 44 52·53	14·754
β Libræ	2	15 9 12·495	+ 3·2172	S. 8 50 41·34	13·614
α Coronæ Borealis	2	15 28 32·930	+ 2·5374	N. 27 12 19·00	−12·381
α Serpentis	2.3	15 37 7·660	+ 2·9503	N. 6 53 5·63	11·651
ζ Ursæ Minoris	4.5	15 49 20·148	− 2·3196	N. 78 14 18·14	10·820
β^1 Scorpii	2	15 57 0·662	+ 3·4755	S. 19 24 16·67	10·272
δ Ophiuchi	3	16 6 44·959	+ 3·1350	S. 3 19 3·01	− 9·633
α Scorpii (*Antares*)	1.2	16 20 31·375	3·6658	S. 26 6 21·24	8·461
η Draconis	3.2	16 22 2·517	0·8207	N. 61 50 36·32	8·233
α Trianguli Australis	2	16 33 21·438	+ 6·2680	S. 68 45 12·79	7·478
ε Ursæ Minoris	4.5	17 0 58·385	− 6·5057	N. 82 16 6·82	− 5·111
α Herculis	var.	17 8 2·159	+ 2·7312	N. 14 33 32·58	4·463
β Draconis	3.2	17 27 9·445	1·3500	N. 52 24 37·36	
α Ophiuchi	2	17 28 12·230	+ 2·7791	N. 12 40 8·	
σ Octantis	6	17 39 3·148	108·6007	S. 89 16	
γ Draconis	2.3	17 53 14·398	1·3920	N. 51 30	
μ^1 Sagittarii	4	18 5 5·468	+ 3·5844	S. 21 5	
δ Ursæ Minoris	4.5	18 19 7·071	−19·3255	N. 86 35	
α Lyræ (*Vega*)	1	18 32 1·700	+ 2·0300	N. 38	
β Lyræ	var.	18 44 43·538	2·2119	N. 33	
ζ Aquilæ	3	18 58 44·635	2·7521	N. 13	
δ Aquilæ	3.4	19 18 11·163	+ 3·0243	N. 2	

MEAN PLACES OF 100 PRINCIPAL FIXED STARS, FOR JANUARY 1, 1855.

Star's Name.	Mag.	Right Ascension.	Annual Var.	Declination.	Annual Var.
		h m s	s	° ′ ″	″
γ Aquilæ - - - -	3	19 39 21·915	+ 2·8538	N.10 15 47·39	+ 8·431
α Aquilæ - (*Altair*)	1.2	19 43 42·440	2·9277	N. 8 29 19·39	9·152
β Aquilæ - - - -	4	19 48 11·381	+ 2·9485	N. 6 2 52·19	8·645
λ Ursæ Minoris - -	5	20 8 31·540	−54·8345	N.88 52 32·15	10·642
α² Capricorni - - -	3.4	20 10 0·310	+ 3·3341	S.12 59 27·17	+10·779
α Pavonis - - - -	2	20 14 9·185	4·8043	S.57 11 40·00	11·053
α Cygni - - - -	2.1	20 36 29·309	2·0417	N.44 45 50·92	12·657
61¹ Cygni - - - -	5.6	21 0 23·854	2·6732	N.38 2 19·32	17·451
ζ Cygni - - - - -	3	21 6 45·941	+ 2·5476	N.29 38 3·08	+14·526
α Cephei - - - -	3.2	21 15 6·946	1·4386	N.61 58 19·89	15·093
β Aquarii - - - -	3	21 23 55·304	3·1636	S. 6 12 23·97	15·589
β Cephei - - - -	3	21 26 46·350	0·8048	N.69 55 28·75	15·698
ε Pegasi - - - -	2.3	21 37 3·833	+ 2·9481	N. 9 12 44·20	+16·284
α Aquarii - - - -	3	21 58 20·031	3·0822	S. 1 1 21·27	17·284
α Gruis - - - -	2	21 59 4·474	3·8213	S.47 39 37·50	17·148
ζ Pegasi - - - -	3.4	22 34 13·798	2·9869	N.10 4 32·67	18·672
α Pis.Aus.(*Fomalhaut*)	1.2	22 49 37·686	+ 3·3315	S.30 23 22·65	+18·945
α Pegasi - (*Markab*)	2	22 57 32·404	2·9827	N.14 25 33·54	19·295
ι Piscium - - - -	4.5	23 32 29·608	3·0840	N. 4 50 26·55	19·461
γ Cephei - - - -	3.4	23 33 25·922	+ 2·3912	N.76 49 23·77	+20·073

FORMULÆ OF REDUCTION.

ACCORDING TO THE NEW FUNDAMENTAL SYSTEM.

1.—*Adopting the Notation and Coefficients employed by the late Mr. Baily, in his Introduction to the Catalogue of Stars of the British Association.*

$A = -$ [illegible]

$B = -$ [illegible]

$C = -$ [illegible]

$D = -$ [illegible]

$a = \cos \alpha \sec \delta$

$b = \sin \alpha \sec \delta$

$e = 46''.0591 + 20''.0547 \sin \alpha \tan \delta$

$d = \cos \alpha \tan \delta$

$a' = \tan \omega \cos \delta - \sin \alpha \sin \delta$

$b' = \cos \alpha \sin \delta$

$c' = 20''.0547 \cos \alpha$

$d' = -\sin \alpha$

$\Delta \alpha$ = the annual proper motion in Right Ascension, *in arc*.
$\Delta \alpha'$ = the annual proper motion in Declination.

Where t denotes the time from the beginning of the year, expressed in fractional parts of a year, $\odot$ the Sun's and $\mathfrak{C}$ the Moon's true longitude, Ω the mean longitude of the Moon's node, and ω the obliquity of the Ecliptic, each for the time t; α the mean Right Ascension, *in arc*, and δ the mean Declination for the beginning of the year. Then, for the time represented by t,

Apparent R.A., *in arc*, $= \alpha + A\,a + B\,b + C\,c + D\,d + t\,\Delta\,\alpha$.
Apparent Dec. - - - $= \delta + A\,a' + B\,b' + C\,c' + D\,d' + t\,\Delta\,\alpha'$.

2.—*Using the same Notation and Coefficients, and assuming*

$46''.0591\ C = f$ $\qquad B = h \cos H$
$20''.0547\ C = g \cos G$ $\qquad A = h \sin H$
$D = g \sin G$ $\qquad A \tan \omega = i$

Apparent R.A., *in arc*, $= \alpha + f + t\,\Delta\,\alpha$
$+ g \sin (G + \alpha) \tan \delta + h \sin$

Apparent Dec. - - - $= \delta + i \cos \delta + t\,\Delta\,\alpha'$
$+ g \cos (G + \alpha) + h \cos (H$

CONSTANTS FOR FACILITATING THE REDUCTION OF STARS.

Day of the Month.	At Greenwich Mean Midnight.					
	f	*g*	*G*	*h*	*H*	*i*
	″	″	° ′	″	° ′	″
Jan. 1	−11·34	+ 7·41	228 12	+20·36	349 49	− 1·57
6	10·48	7·22	230 50	20·30	345 5	2·26
11	9·64	7·07	233 35	20·21	340 20	2·95
16	8·82	6·95	236 27	20·10	335 32	3·61
21	− 8·04	+ 6·86	239 21	+19·97	330 42	− 4·24
26	7·28	6·81	242 16	19·84	325 47	4·85
31	6·56	6·78	245 6	19·70	320 49	5·40
Feb. 5	5·87	6·78	247 50	19·54	315 47	5·92
10	− 5·22	+ 6·80	250 27	+19·40	310 41	− 6·38
15	4·61	6·83	252 55	19·25	305 30	6·80
20	4·02	6·87	255 14	19·12	300 16	7·17
25	3·47	6·91	257 23	19·00	294 58	7·48
Mar. 2	− 2·94	+ 6·96	259 25	+18·90	289 37	− 7·73
7	2·43	7·00	261 19	18·82	284 15	7·92
12	1·93	7·03	263 8	18·77	278 51	8·05
17	1·44	7·06	264 53	18·74	273 26	8·12
22	− 0·96	+ 7·07	266 36	+18·73	268 1	− 8·12
27	− 0·48	7·08	268 19	18·76	262 38	8·07
April 1	+ 0·02	7·08	270 4	18·80	257 17	7·96
6	0·53	7·07	271 52	18·88	251 59	7·79
11	+ 1·06	+ 7·05	273 45	+18·97	246 44	− 7·55
16	1·61	7·03	275 43	19·08	241 34	7·28
21	2·19	7·01	277 49	19·20	236 28	6·95
26	2·80	6·99	280 1	19·34	231 27	6·56
May 1	+ 3·44	+ 6·99	282 22	+19·48	226 32	− 6·14
6	4·11	6·99	284 50	19·62	221 41	5·66
11	4·82	7·02	287 23	19·76	216 55	5·15
16	5·55	7·07	290 1	19·89	212 14	4·60
21	+ 6·32	+ 7·14	292 41	+20·02	207 37	− 4·00
26	7·12	7·24	295 22	20·13	203 3	3·41
31	7·94	7·36	298 0	20·23	198 33	2·79
June 5	8·78	7·52	300 33	20·31	194 6	2·15
10	+ 9·64	+ 7·71	303 0	+20·36	189 41	− 1·50
15	10·51	7·92	305 17	20·40	185 17	0·82
20	11·38	8·15	307 24	20·42	180 54	− 0·14
25	12·26	8·42	309 21	20·41	176 32	+ 0·54
30	13·13	8·70	311 5	20·38	172 9	1·20
July 5	+14·00	+ 9·00	312 38	+20·33	167 45	+ 1·88

CONSTANTS FOR FACILITATING THE REDUCTION OF STARS.

Day of the Month.		At Greenwich Mean Midnight.					
		f	*g*	*G*	*h*	*H*	*i*
		″	″	° ′	″	° ′	″
July	5	+14·00	+ 9·00	312 38	+20·33	167 45	+ 1·88
	10	14·85	9·30	314 0	20·26	163 19	2·53
	15	15·68	9·62	315 12	20·17	158 51	3·16
	20	16·49	9·94	316 15	20·07	154 21	3·77
	25	+17·27	+10·26	317 8	+19·95	149 47	+ 4·36
	30	18·02	10·58	317 54	19·82	145 10	4·92
Aug.	4	18·75	10·89	318 34	19·68	140 28	5·44
	9	19·44	11·19	319 9	19·54	135 42	5·92
	14	+20·10	+11·48	319 39	+19·40	130 52	+ 6·37
	19	20·73	11·77	320 6	19·26	125 56	6·77
	24	21·33	12·04	320 30	19·14	120 56	7·12
	29	21·90	12·29	320 53	19·02	115 53	7·43
Sept.	3	+22·45	+12·53	321 16	+18·92	110 43	+ 7·68
	8	22·97	12·76	321 39	18·84	105 30	7·88
	13	23·48	12·97	322 2	18·78	100 14	8·02
	18	23·98	13·17	322 28	18·74	94 55	8·10
	23	+24·47	+13·36	322 55	+18·73	89 36	+ 8·13
	28	24·97	13·54	323 25	18·75	84 15	8·09
Oct.	3	25·47	13·71	323 58	18·79	78 54	8·00
	8	25·98	13·89	324 34	18·85	73 34	7·85
	13	+26·52	+14·05	325 12	+18·94	68 16	+ 7·64
	18	27·06	14·23	325 54	19·05	63 0	7·36
	23	27·63	14·40	326 38	19·17	57 46	7·04
	28	28·24	14·59	327 25	19·30	52 37	6·66
Nov.	2	+28·88	+14·79	328 13	+19·45	47 31	+ 6·23
	7	29·55	15·00	329 3	19·60	42 29	5·74
	12	30·26	15·23	329 53	19·74	37 30	5·22
	17	31·01	15·48	330 42	19·88	32 35	4·65
	22	+31·78	+15·75	331 31	+20·02		
	27	32·59	16·03	332 17	20·13		
Dec.	2	33·43	16·33	333 2	20·		
	7	34·29	16·65	333 43	2		
	12	+35·17	+16·99	334 20	+2		
	17	36·06	17·34	334 54	?		
	22	36·96	17·70	335 23			
	27	37·85	18·07	335 49			
	32	+38·74	+18·44	336 10	+		

APPARENT PLACES OF α URSÆ MINORIS (*Polaris*), FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		Day of the Month.
	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	R.A.	Dec. N.	
	h m 1 5	° ′ 88 32	h m 1 5	° ′ 88 32	h m 1 5	° ′ 88 32	h m 1 5	° ′ 88 32	
	s	″	s	″	s	″	s	″	
1	78·23	28·4	52·13	28·4	33·02	23·5	23·67	14·6	1
2	77·40	28·5	51·33	28·3	32·50	23·2	23·62	14·3	2
3	76·56	28·6	50·53	28·2	31·99	23·0	23·59	14·0	3
4	75·72	28·7	49·74	28·1	31·49	22·7	23·57	13·7	4
5	74·88	28·7	48·97	28·0	31·01	22·4	23·57	13·4	5
6	74·03	28·8	48·20	27·8	30·55	22·2	23·58	13·1	6
7	73·18	28·9	47·43	27·7	30·10	21·9	{23·60 23·64}	{13·8 13·5}	7
8	72·33	28·9	46·67	27·6	29·66	21·6	23·70	12·2	8
9	71·48	29·0	45·93	27·4	29·23	21·4	23·78	11·9	9
10	70·63	29·0	45·19	27·3	28·81	21·1	23·88	11·6	10
11	69·77	29·0	44·45	27·1	28·40	20·8	23·99	11·3	11
12	68·91	29·1	43·72	26·9	28·02	20·6	24·12	11·0	12
13	68·05	29·1	43·00	26·8	27·66	20·3	24·26	10·7	13
14	67·19	29·1	42·29	26·6	27·31	20·0	24·42	10·4	14
15	66·33	29·2	41·60	26·4	26·98	19·7	24·59	10·1	15
16	65·48	29·2	40·92	26·2	26·66	19·4	24·78	9·8	16
17	64·62	29·2	40·24	26·0	26·35	19·1	24·98	9·6	17
18	63·77	29·2	39·57	25·8	26·06	18·9	25·20	9·3	18
19	62·92	29·2	38·92	25·6	25·78	18·6	25·44	9·0	19
20	62·07	29·2	38·28	25·4	25·53	18·3	25·69	8·7	20
21	61·22	29·1	37·64	25·2	25·29	18·0	25·96	8·4	21
22	60·38	29·1	37·02	25·0	25·06	17·7	26·24	8·1	22
23	59·54	29·0	36·41	24·8	24·84	17·4	26·53	7·9	23
24	58·70	29·0	35·81	24·6	24·64	17·1	26·84	7·6	24
25	57·86	28·9	35·23	24·4	24·47	16·8	27·16	7·3	25
26	57·03	28·9	34·66	24·2	24·31	16·5	27·50	7·1	26
27	56·20	28·8	34·09	23·9	24·17	16·2	27·85	6·8	27
28	55·37	28·7	33·54	23·7	24·04	15·9	28·21	6·5	28
29	54·55	28·6	33·02	23·5	23·92	15·6	28·59	6·2	29
30	53·74	28·6	- -	- -	23·82	15·3	28·98	6·0	30
31	52·93	28·5	- -	- -	23·74	15·0	29·39	5·7	31
32	52·13	28·4	- -	- -	23·67	14·6	- -	- -	32

APPARENT PLACES OF α URSÆ MINORIS (*Polaris*), FOR THE UPPER TRANSIT AT GREENWICH.

y he th.	MAY.		JUNE.		JULY.		AUGUST.		Day of the Month.
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′	
	1 5	88 31	1 5	88 31	1 6	88 31	1 6	88 32	
	s	″	s	″	s	″	s	″	
	29·39	65·7	47·72	59·8	12·05	58·7	37·58	2·7	1
	29·81	65·5	48·46	59·7	12·90	58·7	38·35	2·9	2
	30·24	65·3	49·21	59·6	13·75	58·8	39·11	3·1	3
	30·68	65·0	49·97	59·5	14·59	58·8	39·86	3·3	4
	31·14	64·8	50·73	59·4	15·44	58·9	40·60	3·5	5
	31·61	64·5	51·50	59·3	16·29	59·0	41·34	3·8	6
	32·10	64·2	52·28	59·2	17·14	59·0	42·07	4·0	7
	32·60	64·0	53·06	59·1	17·99	59·1	42·80	4·2	8
	33·11	63·8	53·84	59·0	18·84	59·2	43·52	4·4	9
	33·62	63·6	54·63	58·9	19·69	59·3	44·24	4·7	10
	34·15	63·4	55·42	58·8	20·54	59·4	44·95	5·0	11
	34·70	63·2	56·22	58·8	21·38	59·5	45·65	5·3	12
	35·26	62·9	57·03	58·7	22·22	59·6	46·34	5·5	13
	35·83	62·7	57·84	58·7	23·06	59·8	47·03	5·7	14
	36·41	62·5	58·65	58·7	23·89	59·9	47·71	6·0	15
	37·00	62·3	59·47	58·6	24·73	60·0	48·38	6·3	16
	37·60	62·1	60·29	58·6	25·56	60·1	49·04	6·5	17
	38·21	61·9	61·11	58·6	26·39	60·2	49·70	6·8	18
	38·84	61·8	61·94	58·5	27·21	60·4	50·35	7·1	19
	39·47	61·6	62·77	58·5	28·03	60·5	50·99	7·4	20
	40·11	61·4	63·61	58·5	28·85	60·7	51·62	7·7	21
	40·75	61·2	64·44	58·5	29·67	60·9	52·24	8·0	22
	41·41	61·1	65·28	58·5	30·48	61·1	52·85	8·3	23
	42·08	60·9	66·12	58·5	31·29	61·2	53·45	8·6	24
	42·76	60·7	66·96	58·5	32·09	61·4	54·04	8·9	
	43·45	60·5	67·80	58·5	32·89	61·6	54·63	9·2	
	44·14	60·4	68·65	58·5	33·68	61·7	55·21	9·5	
	44·84	60·3	69·50	58·6	34·47	61·9	55·78		
	45·55	60·1	70·35	58·6	35·25	62·1	56·34		
	46·27	60·0	71·20	58·6	36·03	62·3	56·89		
	46·99	59·9	72·05	58·7	36·81	62·5	57·43		
	47·72	59·8	- -	- -	37·58	62·7	57·95		

APPARENT PLACES OF α URSÆ MINORIS (*Polaris*), FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		Day of the Month.
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	
	h m s 1 6	° ′ ″ 88 32	h m s 1 7	° ′ ″ 88 32	h m s 1 6	° ′ ″ 88 32	h m s 1 6	° ′ ″ 88 32	
	s	″	s	″	s	″	s	″	
1	57·95	11·1	8·82	21·9	68·37	33·8	56·02	43·8	1
2	58·47	11·5	9·01	22·3	68·14	34·2	55·42	44·1	2
3	58·98	11·8	9·18	22·7	67·90	34·6	54·81	44·3	3
4	59·48	12·1	9·34	23·1	67·65	35·0	54·19	44·5	4
5	59·97	12·5	9·48	23·4	67·38	35·3	53·57	44·8	5
6	60·45	12·8	9·61	23·8	67·10	35·7	52·94	45·1	6
7	60·92	13·1	9·72	24·2	66·81	36·0	52·29	45·4	7
8	61·38	13·5	9·82	24·6	66·50	36·4	51·63	45·6	8
9	61·83	13·8	9·91	25·0	66·17	36·8	50·96	45·9	9
10	62·28	14·1	9·99	25·4	65·83	37·2	50·29	46·1	10
11	62·71	14·5	10·05	25·8	65·49	37·5	49·61	46·3	11
12	63·12	14·8	10·10	26·2	65·14	37·8	48·91	46·5	12
13	63·52	15·2	10·14	26·6	64·77	38·2	48·20	46·8	13
14	63·91	15·5	10·17	27·0	64·39	38·6	47·49	47·0	14
15	64·29	15·9	10·18	27·4	63·99	38·9	46·78	47·2	15
16	64·67	16·3	10·18	27·8	63·58	39·3	46·06	47·4	16
17	65·03	16·7	10·17	28·2	63·16	39·6	45·32	47·6	17
18	65·38	17·0	10·14	28·6	62·73	39·9	44·57	47·8	18
19	65·71	17·4	10·10	28·9	62·29	40·2	43·82	48·0	19
20	66·03	17·8	10·04	29·3	61·83	40·5	43·06	48·2	20
21	66·34	18·1	9·98	29·7	61·36	40·8	42·30	48·3	21
22	66·65	18·5	9·90	30·1	60·88	41·1	41·53	48·5	22
23	66·94	18·9	9·81	30·5	60·39	41·4	40·75	48·7	23
24	67·22	19·2	9·70	30·9	59·89	41·8	39·96	48·8	24
25	67·48	19·6	9·58	31·2	59·37	42·1	39·17	49·0	25
26	67·73	20·0	9·44	31·6	58·84	42·4	38·37	49·1	26
27	67·97	20·4	9·29	32·0	58·29	42·6	37·57	49·2	27
28	68·20	20·8	9·12	32·4	57·73	42·9	36·76	49·4	28
29	68·42	21·2	8·95	32·7	57·17	43·2	35·95	49·5	29
30	68·63	21·6	8·77	33·1	56·60	43·5	35·13	49·6	30
31	68·82	21·9	8·58	33·5	56·02	43·8	34·30	49·7	31
32	- -	- -	8·37	33·8	- -	- -	33·46	49·8	32

APPARENT PLACES OF δ URSÆ MINORIS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	JANUARY.		FEBRUARY.		MARCH.		APRIL.		Day of the Month.
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′	
	18 18	86 35	18 18	86 35	18 18	86 35	18 19	86 35	
	s	″	s	″	s	″	s	″	
1	48·52	50·7	51·25	40·6	58·68	34·3	9·42	32·7	1
2	48·50	50·3	51·45	40·3	59·00	34·2	9·77	32·7	2
3	48·49	50·0	51·65	40·0	59·33	34·0	10·12	32·7	3
4	48·48	49·7	51·86	39·7	59·66	33·9	10·46	32·8	4
5	48·49	49·3	52·07	39·4	59·99	33·8	10·80	32·8	5
6	48·50	48·9	52·29	39·2	60·32	33·6	11·14	32·9	6
7	48·51	48·6	52·52	38·9	60·66	33·5	11·48	33·0	7
8	48·53	48·2	52·75	38·7	61·00	33·4	11·82	33·1	8
9	48·57	47·9	52·98	38·4	61·34	33·3	12·16	33·2	9
10	48·61	47·6	53·22	38·2	61·68	33·2	12·49	33·3	10
11	48·66	47·2	53·47	37·9	62·03	33·1	12·82	33·4	11
12	48·72	46·9	53·72	37·7	62·37	33·0	13·14	33·5	12
13	48·78	46·6	53·98	37·4	62·72	32·9	13·46	33·6	13
14	48·85	46·2	54·24	37·2	63·07	32·9	13·79	33·7	14
15	48·92	45·9	54·50	36·9	63·42	32·8	14·11	33·8	15
16	49·00	45·6	54·77	36·7	63·77	32·7	14·43	34·0	16
17	49·09	45·2	55·05	36·5	64·12	32·7	14·74	34·1	17
18	49·19	44·9	55·33	36·3	64·47	32·6	15·05	34·3	18
19	49·29	44·6	55·62	36·1	64·83	32·6	15·36	34·4	19
20	49·40	44·2	55·91	35·9	65·19	32·5	15·66	34·6	20
21	49·52	43·9	56·20	35·7	65·55	32·5	15·96	34·7	21
22	49·64	43·6	56·50	35·5	65·90	32·5	16·26	34·9	22
23	49·78	43·3	56·80	35·3	66·25	32·5	16·55	35·0	23
24	49·92	43·0	57·10	35·1	66·61	32·5	16·84	35·2	24
25	50·06	42·7	57·41	34·9	66·96	32·5	17·12	35·4	
26	50·21	42·4	57·72	34·7	67·31	32·5	17·40	35·6	
27	50·37	42·1	58·04	34·6	67·67	32·5	17·68	35·8	
28	50·53	41·8	58·36	34·4	68·02	32·5	17·95	36·0	
29	50·70	41·5	58·68	34·3	68·37	32·6	18·22	36·2	
30	50·88	41·2	- -	- -	68·72	32·6	18·48	36·4	
31	51·06	40·9	- -	- -	69·07	32·6	18·74	36·6	
32	51·25	40·6	- -	- -	69·42	32·7	- -	-	

APPARENT PLACES OF δ URSÆ MINORIS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	MAY.		JUNE.		JULY.		AUGUST.		Day of the Month.
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′	
	18 19	86 35	18 19	86 35	18 19	86 35	18 19	86 36	
	s	″	s	″	s	″	s	″	
1	18·74	36·6	24·11	44·7	23·73	54·2	17·61	3·1	1
2	18·99	36·8	24·19	45·0	23·62	54·5	17·33	3·3	2
3	19·24	37·0	24·27	45·4	23·51	54·8	17·04	3·6	3
4	19·49	37·2	24·34	45·7	23·39	55·1	16·75	3·8	4
5	19·73	37·4	24·40	46·0	23·26	55·4	16·45	4·0	5
6	19·96	37·6	24·46	46·3	23·13	55·7	16·15	4·3	6
7	20·19	37·9	24·51	46·6	22·99	56·0	15·85	4·5	7
8	20·41	38·1	24·55	46·9	22·84	56·4	15·54	4·7	8
9	20·63	38·3	24·58	47·2	22·69	56·7	15·22	5·0	9
10	20·84	38·6	24·60	47·5	22·53	57·0	14·90	5·2	10
11	21·05	38·8	24·62	47·8	22·36	57·3	14·58	5·4	11
12	21·26	39·1	24·64	48·2	22·19	57·6	14·25	5·6	12
13	21·46	39·4	24·65	48·5	22·01	57·9	13·92	5·8	13
14	21·65	39·6	24·65	48·8	21·83	58·2	13·58	6·0	14
15	21·84	39·9	24·65	49·1	21·64	58·4	13·24	6·2	15
16	22·02	40·2	24·64	49·4	21·45	58·7	12·90	6·4	16
17	22·19	40·4	24·63	49·7	21·25	59·0	12·56	6·6	17
18	22·36	40·7	24·61	50·1	21·05	59·3	12·21	6·8	18
19	22·52	41·0	24·58	50·4	20·84	59·6	11·85	7·0	19
20	22·68	41·2	24·54	50·7	20·62	59·9	11·49	7·1	20
21	22·83	41·5	24·50	51·0	20·40	60·2	11·13	7·3	21
22	22·98	41·8	24·45	51·3	20·17	60·5	10·77	7·5	22
23	23·12	42·1	24·39	51·7	19·94	60·8	10·40	7·7	23
24	23·26	42·4	24·33	52·0	19·70	61·0	10·03	7·9	24
25	23·39	42·7	24·26	52·3	19·45	61·3	9·65	8·0	25
26	23·51	43·0	24·19	52·6	19·20	61·6	9·27	8·1	26
27	23·63	43·3	24·11	52·9	18·95	61·8	8·89	8·3	27
28	23·74	43·6	24·02	53·2	18·69	62·1	8·51	8·5	28
29	23·84	43·9	23·93	53·6	18·43	62·4	8·12	8·6	29
30	23·94	44·1	23·84	53·9	18·16	62·6	7·73	8·8	30
31	24·03	44·4	23·73	54·2	17·89	62·9	7·34	8·9	31
32	*24·11*	*44·7*	- -	- -	17·61	63·1	6·94	9·0	32

APPARENT PLACES OF δ URSÆ MINORIS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.		Day of the Month.
	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	R. A.	Dec. N.	
	h m	° ′	h m	° ′	h m	° ′	h m	° ′	
	18 18	86 36	18 18	86 36	18 18	86 36	18 18	86 35	
	s	″	s	″	s	″	s	″	
1	66·94	9·0	54·28	10·8	41·36	8·0	31·74	61·0	1
2	66·54	9·2	53·84	10·8	40·98	7·8	31·50	60·7	2
3	66·14	9·3	53·41	10·8	40·60	7·6	31·27	60·4	3
4	65·74	9·4	52·98	10·7	40·22	7·5	31·04	60·1	4
5	65·34	9·5	52·54	10·7	39·85	7·3	30·82	59·8	5
6	64·93	9·6	52·11	10·7	39·48	7·1	30·60	59·5	6
7	64·52	9·7	51·68	10·6	39·12	6·9	30·39	59·2	7
8	64·11	9·8	51·25	10·6	38·76	6·7	30·19	58·9	8
9	63·70	9·9	50·82	10·6	38·40	6·5	29·99	58·6	9
10	63·29	10·0	50·39	10·5	38·05	6·3	29·80	58·3	10
11	62·87	10·1	49·96	10·5	37·70	6·1	29·62	58·0	11
12	62·45	10·2	49·53	10·4	37·36	5·9	29·44	57·7	12
13	62·02	10·2	49·10	10·3	37·02	5·7	29·27	57·4	13
14	61·60	10·3	48·67	10·2	36·69	5·5	29·11	57·1	14
15	61·18	10·3	48·25	10·1	36·36	5·2	28·95	56·7	15
16	60·75	10·4	47·83	10·0	36·03	5·0	28·80	56·4	16
17	60·33	10·4	47·41	9·9	35·71	4·7	28·65	56·1	17
18	59·90	10·5	46·99	9·8	35·39	4·5	28·51	55·7	18
19	59·47	10·6	46·57	9·7	35·08	4·3	28·38	55·4	19
20	59·04	10·6	46·15	9·6	34·77	4·0	28·26	55·1	20
21	58·61	10·7	45·74	9·5	34·47	3·7	28·14	54·[illegible]	
22	58·18	10·7	45·33	9·4	34·17	3·5	28·03		
23	57·75	10·7	44·92	9·3	33·88	3·2	27·93		
24	57·32	10·8	44·51	9·2	33·59	3·0	27·8[illegible]		
25	56·88	10·8	44·11	9·0	33·31	2·7	2[illegible]		
26	56·44	10·8	43·71	8·9	33·04	2·5			
27	56·01	10·8	43·31	8·8	32·77	2·2			
28	55·58	10·8	42·92	8·6	32·51	1·9			
29	55·14	10·8	42·53	8·5	32·25	1·6			
30	54·71	10·8	42·13	8·4	31·99	1·3			
31	54·28	10·8	41·74	8·2	31·74	1·0			
32	- -	- -	41·36	8·0	- -	- -			

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Andromedæ.				γ Pegasi. (*Algenib*)				β Hydri.			
	R.A.		Dec. *North.*		R.A.		Dec. *North.*		R.A.		Dec. *South.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	0 0		28 17		0 5		14 22		0 17		78 3	
Jan. 1	52·76		26·4		45·30		36·7		64·11		102·8	
		0·14		0·9		0·11		0·8		0·89		1·1
11	52·62		25·5		45·19		35·9		63·22		101·6	
		0·12		1·2		0·10		0·9		0·82		1·1
21	52·50		24·3		45·09		35·0		62·40		99·9	
		0·12		1·4		0·09		1·0		0·73		2·1
31	52·38		22·9		45·00		34·0		61·67		97·6	
		0·09		1·5		0·08		1·0		0·62		2·1
Feb. 10	52·29		21·4		44·92		33·0		61·05		94·8	
		0·07		1·6		0·05		1·0		0·50		3·1
20	52·22		19·8		44·87		32·0		60·55		91·7	
		0·03		1·6		0·03		0·8		0·36		3·5
Mar. 2	52·19		18·2		44·84		31·2		60·19		88·2	
		0·00		1·5		0·01		0·8		0·22		3·7
12	52·19		16·7		44·85		30·4		59·97		84·5	
		0·05		1·4		0·04		0·5		0·05		3·8
22	52·24		15·3		{44·89 / 44·90}		{29·8 / 29·8}		59·92		80·7	
		0·10		1·1		0·08		0·2		0·12		4·3
Apr. 1	52·34		14·2		44·98		29·6		60·04		76·4	
		0·14		0·8		0·13		0·6		0·28		3·9
11	52·48		13·4		45·11		29·6		60·32		72·5	
		0·19		0·4		0·17		0·3		0·43		3·7
21	52·67		13·0		45·28		29·9		60·75		68·8	
		0·22		0·1		0·21		0·6		0·58		3
May 1	52·89		12·9		45·49		30·5		61·33		65·2	
		0·27		0·3		0·25		0·9		0·73		
11	53·16		13·2		45·74		31·4		62·06		61·9	
		0·30		0·8		0·28		1·3		0·85		
21	53·46		14·0		46·02		32·7		62·91		59·0	
		0·33		1·1		0·30		1·6		0·96		
31	53·79		15·1		46·32		34·3		63·87		56·4	
		0·34		1·4		0·32		1·7		1·05		
June 10	54·13		16·5		46·64		36·0		64·92		54·3	
		0·35		1·8		0·33		2·0		1·11		
20	54·48		18·3		46·97		38·0		66·03		52·7	
		0·35		2·1		0·33		2·1		1·14		
30	54·83		20·4		47·30		40·1		67·17		51·6	
July 10	55·17		22·6		47·62		42·3		68·31		51·1	
		0·32		2·4		0·30		2·2		1·12		
20	55·49		25·0		47·92		44·5		69·43		51·2	
		0·29		2·6		0·28		2·2		1·06		
30	55·78		27·6		48·20		46·7		70·49		51·9	
		0·27		2·5		0·26		2·1		0·97		
Aug. 9	56·05		30·1		48·46		48·8		71·46		53·1	
		0·22		2·6		0·22		2·1		0·86		
19	56·27		32·7		48·68		50·9		72·32		54·8	
		0·19		2·5		0·18		1·9		0·71		
29	56·46		35·2		48·86		52·8		73·03		56·9	
		0·14		2·4		0·15		1·7		0·54		
Sept. 8	56·60		37·6		49·01		54·5		73·57		59·4	
		0·11		2·3		0·11		1·5		0·36		
18	56·71		39·9		49·12		56·0		73·93		62·2	
		0·06		2·0		0·07		1·3		0·18		
28	56·77		41·9		49·19		57·3		74·11		65·2	
		0·03		1·9		0·03		1·0		0·02		
Oct. 8	56·80		43·8		49·22		58·3		74·09		68·2	
		0·01		1·6		0·00		0·8		0·22		
18	56·79		45·4		49·22		59·1		73·87		71·1	
		0·04		1·3		0·02		0·6		0·40		
28	56·75		46·7		49·20		59·7		73·47		73·9	
Nov. 7	56·69		47·8		49·15		60·1		72·92		76·4	
		0·09		0·8		0·07		0·2		0·69		
17	56·60		48·6		49·08		60·3		72·23		78·4	
		0·11		0·4		0·08		0·1		0·80		
27	56·49		49·0		49·00		60·2		71·43		79·9	
		0·11		0·1		0·10		0·2		0·87		
Dec. 7	56·38		49·1		48·90		60·0		70·56		80·9	
		0·13		0·1		0·11		0·4		0·92		
17	56·25		49·0		48·79		59·6		69·64		81·3	
		0·14		0·5		0·11		0·6		0·93		
27	56·11		48·5		48·68		59·0		68·71		81·0	
		0·13		0·8		0·11		0·8		0·91		
37	55·98		47·7		48·57		58·2		67·80		80·2	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Cassiopeæ.				β Ceti.				θ¹ Ceti.			
	R.A.		Dec. *North.*		R.A.		Dec. *South.*		R.A.		Dec. *South.*	
	h m		° ′		h m		° ′		h m		° ′	
	0 32		55 44		0 36		18 46		1 16		8 55	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	16·89		41·0		17·83		72·2		46·06		66·3	
		0·28		0·4		0·12		0·4		0·11		0·7
11	16·61		40·6		17·71		72·6		45·95		67·0	
		0·28		1·0		0·11		0·1		0·12		0·4
21	16·33		39·6		17·60		72·7		45·83		67·4	
		0·27		1·4		0·11		0·1		0·12		0·3
31	16·06		38·2		17·49		72·6		45·71		67·7	
		0·24		1·8		0·09		0·4		0·11		0·1
Feb. 10	15·82		36·4		17·40		72·2		45·60		67·8	
		0·19		2·1		0·08		0·6		0·10		0·1
20	15·63		34·3		17·32		71·6		45·50		67·7	
		0·15		2·4		0·05		1·0		0·08		0·4
Mar. 2	15·48		31·9		17·27		70·6		45·42		67·3	
		0·09		2·5		0·02		1·2		0·06		0·6
12	15·39		29·4		17·25		69·4		45·36		66·7	
		0·02		2·5		0·01		1·4		0·03		0·8
22	15·37		26·9		17·26		68·0		45·33		65·9	
		0·06		2·6		0·06		1·9		0·01		1·1
Apr. 1	15·43		24·3		17·32		66·1		45·34		64·8	
		0·13		2·1		0·09		1·9		0·05		1·5
11	15·56		22·2		17·41		64·2		45·39		63·3	
		0·21		1·9		0·14		2·1		0·10		1·5
21	15·77		20·3		17·55		62·1		45·49		61·8	
		0·28		1·5		0·18		2·3		0·14		1·8
May 1	16·05		18·8		17·73		59·8		45·63		60·0	
		0·34		1·1		0·22		2·4		0·18		2·0
11	16·39		17·7		17·95		57·4		45·81		58·0	
		0·39		0·6		0·25		2·4		0·22		2·1
21	16·78		17·1		18·20		55·0		46·03		55·9	
		0·44		0·1		0·29		2·5		0·25		2·2
31	17·22		17·0		18·49		52·5		46·28		53·7	
		0·46		0·4		0·30		2·4		0·28		2·2
June 10	17·68		17·4		18·79		50·1		46·56		51·5	
		0·48		0·9		0·33		2·3		0·31		2·3
20	18·16		18·3		19·12		47·8		46·87		49·2	
		0·49		1·3		0·34		2·1		0·32		2·2
30	18·65		19·6		19·46		45·7		47·19		47·0	
		0·48		1·8		0·33		1·9		0·32		2·0
July 10	19·13		21·4		19·79		43·8		47·51		45·0	
		0·46		2·2		0·32		1·6		0·32		1·9
20	19·59		23·6		20·11		42·2		47·83		43·1	
		0·43		2·5		0·31		1·3		0·31		1·7
30	20·02		26·1		20·42		40·9		48·14		41·4	
		0·39		2·8		0·29		1·0		0·29		1·4
Aug. 9	20·41		28·9		20·71		39·9		48·43		40·0	
		0·34		3·0		0·25		0·7		0·27		1·2
19	20·75		31·9		20·96		39·2		48·70		38·8	
		0·30		3·2		0·22		0·2		0·24		0·8
29	21·05		35·1		21·18		39·0		48·94		38·0	
		0·24		3·3		0·18		0·0		0·21		0·5
Sept. 8	21·29		38·4		21·36		39·0		49·15			
		0·18		3·3		0·14		0·4		0·17		
18	21·47		41·7		21·50		39·4		49·32			
		0·12		3·2		0·10		0·7		0·1		
28	21·59		44·9		21·60		40·1		49·47			
		0·07		3·2		0·07		0·9		c		
Oct. 8	21·66		48·1		21·67		41·0		49·57			
		0·01		3·0		0·03		1·1				
18	21·67		51·1		21·70		42·1		49·			
		0·05		2·8		0·01		1·3				
28	21·62		53·9		21·69		43·4		49·			
		0·09		2·5		0·03		1·3				
Nov. 7	21·53		56·4		21·66		44·7		49·			
		0·13		2·2		0·06		1·3				
17	21·40		58·6		21·60		46·0		4			
		0·18		1·8		0·08		1·2				
27	21·22		60·4		21·52		47·2					
		0·21		1·3		0·09		1·1				
Dec. 7	21·01		61·7		21·43		48·3					
		0·25		0·8		0·10		0·9				
17	20·76		62·5		21·33		49·2					
		0·26		0·4		0·11		0·8				
27	20·50		62·9		21·22		50·0					
		0·28		0·2		0·12		0·5				
37	20·22		62·7		21·10		50·5					

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Eridani. (*Achernar*)				α Arietis.				γ Ceti.			
	R.A.		Dec. *South.*		R.A.		Dec. *North.*		R.A.		Dec. *North.*	
	h m		° ′		h m		° ′		h m		° ′	
	1 32		57 57		1 58		22 46		2 35		2 37	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	19·06		108·0		59·98		32·7		47·29		17·9	
		0·32		0·2		0·11		0·3		0·10		0·6
11	18·74		108·2		59·87		32·4		47·19		17·3	
		0·32		0·3		0·13		0·4		0·11		0·6
21	18·42		107·9		59·74		32·0		47·08		16·7	
		0·32		0·8		0·15		0·6		0·13		0·5
31	18·10		107·1		59·59		31·4		46·95		16·2	
		0·30		1·4		0·14		0·7		0·14		0·4
Feb. 10	17·80		105·7		59·45		30·7		46·81		15·8	
		0·28		1·9		0·14		0·9		0·14		0·3
20	17·52		103·8		59·31		29·8		46·67		15·5	
		0·24		2·3		0·13		0·8		0·13		0·2
Mar. 2	17·28		101·5		59·18		29·0		46·54		15·3	
		0·19		2·7		0·10		0·9		0·12		0·0
12	17·09		98·8		59·08		28·1		46·42		15·3	
		0·14		3·0		0·07		0·8		0·09		0·2
22	16·95		95·8		59·01		27·3		46·33		15·5	
		0·08		3·4		0·03		0·7		0·06		0·4
April 1	16·87		92·4		58·98		26·6		46·27		15·9	
		0·02		3·5		0·01		0·6		0·03		0·5
11	16·85		88·9		58·99		26·0		46·24		16·4	
		0·06		4·0		0·05		0·4		0·02		0·8
21	16·91		84·9		59·04		25·6		46·26		17·2	
		0·13		3·7		0·13		0·2		0·06		1·1
May 1	17·04		81·2		59·17		25·4		{46·33 / 46·33}		{18·13 / 18·43}	
		0·20		3·6		0·16		0·2		0·11		1·1
11	17·24		77·6		59·33		25·6		46·44		19·5	
		0·27		3·5		0·21		0·4		0·16		1·4
21	17·51		74·1		59·54		26·0		46·60		20·9	
		0·33		3·3		0·24		0·7		0·20		1·6
31	17·84		70·8		59·78		26·7		46·80		22·5	
		0·38		3·1		0·29		0·9		0·23		1·7
June 10	18·22		67·7		60·07		27·6		47·03		24·2	
		0·43		2·7		0·31		1·2		0·26		1·9
20	18·65		65·0		60·38		28·8		47·29		26·1	
		0·46		2·3		0·33		1·4		0·29		1·9
30	19·11		62·7		60·71		30·2		47·58		28·0	
		0·49		1·8		0·34		1·6		0·31		1·9
July 10	19·60		60·9		61·05		31·8		47·89		29·9	
		0·49		1·2		0·34		1·8		0·31		1·8
20	20·09		59·7		61·39		33·6		48·20		31·7	
		0·49		0·8		0·33		1·8		0·32		1·8
30	20·58		58·9		61·72		35·4		48·52		33·5	
		0·47		0·2		0·33		1·9		0·31		1·7
Aug. 9	21·05		58·7		62·05		37·3		48·83		35·2	
		0·44		0·4		0·31		1·9		0·30		1·4
19	21·49		59·1		62·36		39·2		49·13		36·6	
		0·40		1·0		0·28		1·8		0·28		1·2
29	21·89		60·1		62·64		41·0		49·41		37·8	
		0·35		1·4		0·26		1·8		0·26		1·0
Sept. 8	22·24		61·5		62·90		42·8		49·67		38·8	
		0·29		1·9		0·22		1·7		0·24		0·8
18	22·53		63·4		63·12		44·5		49·91		39·6	
		0·22		2·4		0·19		1·6		0·21		0·4
28	22·75		65·8		63·31		46·1		50·12		40·0	
		0·15		2·6		0·17		1·4		0·18		0·2
Oct. 8	22·90		68·4		63·48		47·5		50·30		40·2	
		0·08		2·8		0·13		1·2		0·16		0·0
18	22·98		71·2		63·61		48·7		50·46		40·2	
		0·01		2·9		0·09		1·1		0·12		0·2
28	22·99		74·1		63·70		49·8		50·58		40·0	
		0·06		2·8		0·07		0·9		0·09		0·4
Nov. 7	22·93		76·9		63·77		50·7		50·67		39·6	
		0·12		2·7		0·03		0·7		0·07		0·5
17	22·81		79·6		63·80		51·4		50·74		39·1	
		0·18		2·4		0·01		0·6		0·03		0·7
27	22·63		82·0		63·81		52·0		50·77		38·4	
		0·22		2·0		0·03		0·3		0·00		0·7
Dec. 7	22·41		84·0		63·78		52·3		50·77		37·7	
		0·26		1·7		0·05		0·2		0·02		0·7
17	22·15		85·7		63·73		52·5		50·75		37·0	
		0·29		1·1		0·08		0·0		0·06		0·7
27	21·86		86·8		63·65		52·5		50·69		36·3	
		0·32		0·5		0·11		0·2		0·08		0·7
37	21·54		87·3		63·54		52·3		50·61		35·6	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Ceti.				α Persei.				γ Tauri.			
	R.A.		Dec. *North.*		R.A.		Dec. *North.*		R.A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	2 54		3 31		3 13		49 20		3 38		23 39	
Jan. 1	42·12		4·2		59·49		38·8		52·36		16·9	
		0·09		0·6		0·15		1·0		0·06		0·1
11	42·03		3·6		59·34		39·8		52·30		17·0	
		0·11		0·6		0·18		0·7		0·10		0·0
21	41·92		3·0		59·16		40·5		52·20		17·0	
		0·13		0·5		0·22		0·3		0·13		0·1
31	41·79		2·5		58·94		40·8		52·07		16·9	
		0·13		0·4		0·25		0·1		0·16		0·2
Feb. 10	41·66		2·1		58·69		40·7		51·91		16·7	
		0·15		0·3		0·25		0·5		0·16		0·3
20	41·51		1·8		58·44		40·2		51·75		16·4	
		0·14		0·2		0·25		0·8		0·17		0·4
Mar. 2	41·37		1·6		58·19		39·4		51·58		16·0	
		0·13		0·0		0·23		1·1		0·16		0·5
12	41·24		1·6		57·96		38·3		51·42		15·5	
		0·10		0·1		0·20		1·4		0·15		0·5
22	41·14		1·7		57·76		36·9		51·27		15·0	
		0·08		0·3		0·16		1·5		0·11		0·6
April 1	41·06		2·0		57·60		35·4		51·16		14·4	
		0·04		0·5		0·09		1·7		0·08		0·4
11	41·02		2·5		57·51		33·7		51·08		14·0	
		0·00		0·7		0·04		1·7		0·04		0·5
21	41·02		3·2		57·47		32·0		51·04		13·5	
		0·04		0·9		0·03		1·7		0·01		0·3
May 1	41·06		4·1		57·50		30·3		51·05		13·2	
		0·10		1·2	{57·60 / 57·61}	0·10	{28·8 / 28·6}	1·5		0·05		0·1
11	41·16		5·3						51·10		13·1	
		0·14		1·3		0·17		1·4		0·12		0·0
21	41·30		6·6		57·78		27·2		51·22		13·1	
		0·19		1·5		0·24		1·1		0·17		0·2
31	41·49		8·1		58·02		26·1		51·39		13·3	
		0·22		1·6		0·30		0·8		0·20		0·4
June 10	41·71		9·7		58·32		25·3		51·59		13·7	
		0·25		1·8		0·34		0·5		0·25		0·6
20	41·96		11·5		58·66		24·8		51·84		14·3	
		0·27		1·8		0·38		0·2		0·28		0·8
30	42·23		13·3		59·04		24·6		52·12		15·1	
		0·30		1·9		0·42		0·1		0·30		0·9
July 10	42·53		15·2		59·46		24·7		52·42		16·0	
		0·31		1·8		0·44		0·4		0·32		1·1
20	42·84		17·0		59·90		25·1		52·74		17·1	
		0·32		1·7		0·45		0·8		0·34		1·1
30	43·16		18·7		60·35		25·9		53·08		18·2	
		0·31		1·6		0·45		1·1		0·33		1·3
Aug. 9	43·47		20·3		60·80		27·0		53·41		19·5	
		0·30		1·4		0·44		1·3		0·34		1·2
19	43·77		21·7		61·24		28·3		53·75		20·7	
		0·29		1·3		0·43		1·6		0·33		1·3
29	44·06		23·0		61·67		29·9		54·08		22·0	
		0·28		1·0		0·41		1·7		0·32		1·2
Sept. 8	44·34		24·0		62·08		31·6		54·40		23·2	
		0·25		0·7		0·39		2·0		0·30		1·2
18	44·59		24·7		62·47		33·6		54·70		24·4	
		0·22		0·5		0·35		2·1		0·28		1·1
28	44·81		25·2		62·82		35·7		54·98		25·5	
		0·20		0·2		0·32		2·1		0·26		0·9
Oct. 8	45·01		25·4		63·14		37·8		55·24		26·4	
		0·17		0·0		0·28		2·3		0·23		0·[illegible]
18	45·18		25·4		63·42		40·1		55·47		27·3	
		0·15		0·2		0·24		2·2		0·21		[illegible]
28	45·33		25·2		63·66		42·3		55·68		28·1	
		0·11		0·4		0·19		2·2		0·17		
Nov. 7	45·44		24·8		63·85		44·5		55·85		28·[illegible]	
		0·09		0·5		0·15		2·2		0·15		
17	45·53		24·3		64·00		46·7		56·00			
		0·05		0·6		0·10		2·1		0·11		
27	45·58		23·7		64·10		48·8		56·11			
		0·02		0·7		0·04		1·9		0·07		
Dec. 7	45·60		23·0		64·14		50·7		56·18			
		0·01		0·7		0·01		1·7		0·04		
17	45·59		22·3		64·13		52·4		56·22			
		0·04		0·7		0·07		1·5		0·01		
27	45·55		21·6		64·06		53·9		56·21			
		0·07		0·7		0·11		1·2		0·[illegible]		
37	45·48		20·9		63·95		55·1		56·17			

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	γ' Eridani.				α Tauri. (*Aldebaran*)				α Aurigæ. (*Capella*)			
	R.A.		Dec. *South.*		R.A.		Dec. *North.*		R.A.		Dec. *North.*	
	h m		° ′		h m		° ′		h m		° ′	
	3 51		13 55		4 27		16 12		5 5		45 50	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	16·28		29·7		36·57		54·0		59·65		50·5	
		0·07		1·3		0·03		0·1		0·00		1·4
11	16·21		31·0		36·54		53·9		59·65		51·9	
		0·10		1·1		0·06		0·2		0·07		1·3
21	16·11		32·1		36·48		53·7		59·58		53·2	
		0·13		0·9		0·10		0·2		0·12		1·1
31	15·98		33·0		36·38		53·5		59·46		54·3	
		0·15		0·6		0·13		0·2		0·17		0·8
Feb. 10	15·83		33·6		36·25		53·3		59·29		55·1	
		0·17		0·2		0·16		0·2		0·21		0·6
20	15·66		33·8		36·09		53·1		59·08		55·7	
		0·17		0·0		0·16		0·2		0·23		0·2
Mar. 2	15·49		33·8		35·93		52·9		58·85		55·9	
		0·16		0·3		0·17		0·2		0·24		0·0
12	15·33		33·5		35·76		52·7		58·61		55·9	
		0·16		0·6		0·16		0·2		0·24		0·4
22	15·17		32·9		35·60		52·5		58·37		55·5	
		0·13		0·9		0·14		0·1		0·23		0·6
April 1	15·04		32·0		35·46		52·4		58·14		54·9	
		0·10		1·2		0·11		0·1		0·19		0·8
11	14·94		30·8		35·35		52·3		57·95		54·1	
		0·06		1·5		0·08		0·0		0·15		1·1
21	14·88		29·3		35·27		52·3		57·80		53·0	
		0·02		1·7		0·03		0·1		0·10		1·2
May 1	14·86		27·6		35·24		52·4		57·70		51·8	
		0·02		1·9		0·01		0·2		0·04		1·3
11	14·88		25·7		35·25		52·6		57·66		50·5	
		0·08		2·1		0·06		0·3		0·02		1·3
21	{14·96 / 14·96}		{23·6 / 23·4}		35·31		52·9		57·68		49·2	
		0·12		2·3		0·11		0·5		0·09		1·3
31	15·08		21·1		35·42		53·4		57·77		47·9	
		0·16		2·3		0·16		0·7	s	0·16		1·3
June 10	15·24		18·8		35·58		54·1		57·93		46·6	
		0·20		2·4		0·19		0·8		0·20		1·1
20	15·44		16·4		35·77		54·9		58·13		45·5	
		0·24		2·4		0·23		0·8		0·26		0·9
30	15·68		14·0		36·00		55·7		58·39		44·6	
		0·26		2·3		0·26		1·0		0·30		0·8
July 10	15·94		11·7		36·26		56·7		58·69		43·8	
		0·28		2·1		0·28		1·1		0·34		0·6
20	16·22		9·6		36·54		57·8		59·03		43·2	
		0·30		1·9		0·30		1·1		0·38		0·4
30	16·52		7·7		36·84		58·9		59·41		42·8	
		0·30		1·7		0·31		1·0		0·39		0·2
Aug. 9	16·82		6·0		37·15		59·9		59·80		42·6	
		0·31		1·4		0·32		1·0		0·41		0·1
19	17·13		4·6		37·47		60·9		60·21		42·7	
		0·30		1·0		0·32		1·0		0·43		0·2
29	17·43		3·6		37·79		61·9		60·64		42·9	
		0·30		0·6		0·31		0·8		0·43		0·4
Sept. 8	17·73		3·0		38·10		62·7		61·07		43·3	
		0·28		0·2		0·31		0·7		0·42		0·5
18	18·01		2·8		38·41		63·4		61·49		43·8	
		0·26		0·2		0·30		0·6		0·42		0·7
28	18·27		3·0		38·71		64·0		61·91		44·5	
		0·24		0·6		0·28		0·4		0·40		0·9
Oct. 8	18·51		3·6		38·99		64·4		62·31		45·4	
		0·22		1·0		0·26		0·3		0·39		1·0
18	18·73		4·6		39·25		64·7		62·70		46·4	
		0·19		1·2		0·24		0·2		0·36		1·2
28	18·92		5·8		39·49		64·9		63·06		47·6	
		0·16		1·5		0·21		0·0		0·34		1·2
Nov. 7	19·08		7·3		39·70		64·9		63·40		48·8	
		0·12		1·6		0·19		0·0		0·30		1·4
17	19·20		8·9		39·89		64·9		63·70		50·2	
		0·10		1·8		0·16		0·1		0·25		1·5
27	19·30		10·7		40·05		64·8		63·95		51·7	
		0·06		1·7		0·12		0·1		0·21		1·5
Dec. 7	19·36		12·4		40·17		64·7		64·16		53·2	
		0·02		1·8		0·08		0·2		0·15		1·5
17	19·38		14·2		40·25		64·5		64·31		54·7	
		0·02		1·6		0·04		0·2		0·10		1·5
27	19·36		15·8		40·29		64·3		64·41		56·2	
		0·05		1·4		0·01		0·2		0·03		1·5
37	19·31		17·2		40·28		64·1		64·44		57·7	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	β Orionis. (*Rigel*)				β Tauri.				δ Orionis.			
	R. A.				R. A.				R. A.			
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	5 7	34·80	8 22	21·0	5 17	8·20	28 28	54 6	5 24	36·55	0 24	34·7
Jan. 1		0·01		1·5		0·01		0·5		0·02		1·1
11	34·79	0·05	22·5	1·3	8·21	0·03	55·1	0·4	36·57	0·03	35·8	1·0
21	34·74	0·09	23·8	1·0	8·18	0·08	55·5	0·5	36·54	0·07	36·8	0·9
31	34·65		24·8		8·10		56·0		36·47		37·7	
		0·12		0·9		0·12		0·3		0·11		0·6
Feb. 10	34·53	0·15	25·7	0·6	7·98	0·15	56·3	0·2	36·36	0·13	38·3	0·5
20	34·38	0·16	26·3	0·3	7·83	0·17	56·5	0·1	36·23	0·16	38·8	0·3
Mar. 2	34·22	0·18	26·6	0·1	7·66	0·18	56·6	0·0	36·07	0·17	39·1	0·1
12	34·04		26·7		7·48		56·6		35·90		39·2	
		0·17		0·2		0·19		0·1		0·17		0·0
22	33·87	0·16	26·5	0·5	7·29	0·18	56·5	0·3	35·73	0·16	39·2	0·2
Apr. 1	33·71	0·15	26·0	0·7	7·11	0·15	56·2	0·3	35·57	0·14	39·0	0·5
11	33·56	0·11	25·3	0·9	6·96	0·12	55·9	0·4	35·43	0·12	38·5	0·6
21	33·45		24·4		6·84		55·5		35·31		37·9	
		0·08		1·1		0·08		0·5		0·08		0·8
May 1	33·37	0·04	23·3	1·4	6·76	0·03	55·0	0·4	35·23	0·04	37·1	1·0
11	33·33	0·01	21·9	1·6	6·73	0·01	54·6	0·4	35·19	0·01	36·1	1·1
21	33·34	0·05	20·3	1·7	6·74	0·07	54·2	0·3	35·18	0·04	35·0	1·2
31	33·39		18·6		6·81		53·9		35·22		33·8	
		0·10		2·1		0·11		0·3		0·09		1·4
June 10	33·49	0·13	16·5	1·9	6·92	0·18	53·6	0·1	35·31	0·13	32·4	1·7
20	33·62	0·17	14·6	2·0	7·10	0·20	53·5	0·0	35·44	0·16	30·7	1·5
30	33·79	0·21	12·6	2·0	7·30	0·24	53·5	0·0	35·60	0·20	29·2	1·6
July 10	34·00		10·6		7·54		53·5		35·80		27·6	
		0·23		1·9		0·28		0·2		0·23		1·5
20	34·23	0·26	8·7	1·8	7·82	0·29	53·7	0·3	36·03	0·25	26·1	1·5
30	34·49	0·28	6·9	1·6	8·11	0·32	54·0	0·3	36·28	0·27	24·6	1·4
Aug. 9	34·77	0·28	5·3	1·4	8·43	0·33	54·3	0·4	36·55	0·28	23·2	1·1
19	35·05		3·9		8·76		54·7		36·83		22·1	
		0·29		1·1		0·34		0·4		0·29		0·9
29	35·34	0·30	2·8	0·7	9·10	0·35	55·1	0·4	37·12	0·30	21·2	0·7
Sept. 8	35·64	0·30	2·1	0·4	9·45	0·34	55·5	0·5	37·42	0·29	20·5	0·4
18	35·94	0·29	1·7	0·0	9·79	0·34	56·0	0·4	37·71	0·30	20·1	0·1
28	36·23		1·7		10·13		56·4		38·01		20·0	
		0·28		0·4		0·33		0·4				0·2
Oct. 8	36·51	0·27	2·1	0·7	10·46	0·32	56·8	0·4	38·30			0·5
18	36·78	0·24	2·8	1·0	10·78	0·31	57·2	0·4	38·			0·8
28	37·02	0·23	3·8	1·3	11·09	0·28	57·6	0·4	38			1·0
Nov. 7	37·25		5·1		11·37		58·0		39			1·1
		0·21		1·5		0·25		0·4				
17	37·46	0·17	6·6	1·7	11·62	0·22	58·4	0·4				·3
27	37·63	0·13	8·3	1·7	11·84	0·19	58·8	0·4				1
Dec. 7	37·76	0·10	10·0	1·7	12·03	0·15	59·2	0·5				1
17	37·86		11·7		12·18		59·7					
		0·06		1·7		0·10		0·4				
27	37·92	0·02	13·4	1·6	12·28	0·04	60·1	0·4				
37	37·94		15·0		12·32		60·6					

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Leporis.				ε Orionis.				α Columbæ.			
	R. A.		Dec. *South.*		R. A.		Dec. *South.*		R. A.		Dec. *South.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	5 26		17 55		5 28		1 17		5 34		34 8	
Jan. 1	20·89	0·00	44·8	1·9	51·95	0·02	51·6	1·1	25·12	0·03	72·9	2·6
11	20·89	0·05	46·7	1·7	51·97	0·03	52·7	1·1	25·09	0·08	75·5	2·4
21	20·84	0·09	48·4	1·5	51·94	0·07	53·8	0·9	25·01	0·12	77·9	2·0
31	20·75		49·9		51·87		54·7		24·89		79·9	
		0·13		1·2		0·11		0·7		0·16		1·6
Feb. 10	20·62	0·15	51·1	0·9	51·76	0·13	55·4	0·5	24·73	0·20	81·5	1·1
20	20·47	0·18	52·0	0·5	51·63	0·15	55·9	0·3	24·53	0·22	82·6	0·8
Mar. 2	20·29	0·19	52·5	0·2	51·48	0·17	56·2	0·1	24·31	0·24	83·4	0·3
12	20·10		52·7		51·31		56·3		24·07		83·7	
		0·19		0·2		0·18		0·0		0·23		0·2
22	19·91	0·18	52·5	0·5	51·13	0·16	56·3	0·3	23·84	0·23	83·5	0·6
Apr. 1	19·73	0·16	52·0	0·8	50·97	0·14	56·0	0·4	23·61	0·21	82·9	1·1
11	19·57	0·14	51·2	1·1	50·83	0·12	55·6	0·6	23·40	0·19	81·8	1·4
21	19·43		50·1		50·71		55·0		23·21		80·4	
		0·11		1·4		0·09		0·9		0·15		1·8
May 1	19·32	0·06	48·7	1·7	50·62	0·04	54·1	1·0	23·06	0·11	78·6	2·2
11	19·26	0·02	47·0	1·9	50·58	0·01	53·1	1·1	22·95	0·06	76·4	2·4
21	19·24	0·02	45·1	2·1	50·57	0·03	52·0	1·3	22·89	0·02	74·0	2·7
31	19·26		43·0		50·60		50·7		22·87		71·3	
		0·06		2·3		0·08		1·4		0·03		2·8
June 10	19·32	0·12	40·7	2·6	50·68	0·13	49·3	1·7	22·90	0·10	68·5	3·3
20	19·44	0·15	38·1	2·4	50·81	0·16	47·6	1·6	23·00	0·13	65·2	3·0
30	19·59	0·18	35·7	2·4	50·97	0·20	46·0	1·6	23·13	0·17	62·2	2·9
July 10	19·77		33·3		51·17		44·4		23·30		59·3	
		0·22		2·3		0·22		1·6		0·21		2·8
20	19·99	0·24	31·0	2·1	51·39	0·24	42·8	1·5	23·51	0·24	56·5	2·6
30	20·23	0·26	28·9	1·8	51·63	0·27	41·3	1·3	23·75	0·27	53·9	2·3
Aug. 9	20·49	0·28	27·1	1·6	51·90	0·28	40·0	1·2	24·02	0·30	51·6	1·9
19	20·77		25·5		52·18		38·8		24·32		49·7	
		0·30		1·2		0·29		0·9		0·31		1·4
29	21·07	0·30	24·3	0·8	52·47	0·29	37·9	0·7	24·63	0·32	48·3	0·9
Sept. 8	21·37	0·29	23·5	0·4	52·76	0·30	37·2	0·4	24·95	0·33	47·4	0·4
18	21·66	0·30	23·1	0·1	53·06	0·29	36·8	0·1	25·28	0·32	47·0	0·1
28	21·96		23·2		53·35		36·7		25·60		47·1	
		0·29		0·5		0·29		0·3		0·32		0·7
Oct. 8	22·25	0·28	23·7	0·9	53·64	0·28	37·0	0·5	25·92	0·31	47·8	1·3
18	22·53	0·27	24·6	1·4	53·92	0·27	37·5	0·8	26·23	0·28	49·1	1·7
28	22·80	0·24	26·0	1·7	54·19	0·25	38·3	1·0	26·51	0·26	50·8	2·2
Nov. 7	23·04		27·7		54·44		39·3		26·77		53·0	
		0·21		1·9		0·22		1·2		0·23		2·5
17	23·25	0·19	29·6	2·2	54·66	0·20	40·5	1·4	27·00	0·19	55·5	2·8
27	23·44	0·15	31·8	2·2	54·86	0·16	41·9	1·4	27·19	0·15	58·3	2·9
Dec. 7	23·59	0·11	34·0	2·3	55·02	0·13	43·3	1·4	27·34	0·10	61·2	3·0
17	23·70		36·3		55·15		44·7		27·44		64·2	
		0·06		2·2		0·08		1·3		0·06		2·9
27	23·76	0·03	38·5	2·1	55·23	0·04	46·0	1·3	27·50	0·00	67·1	2·8
37	23·79		40·6		55·27		47·3		27·50		69·9	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS,
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Orionis.		α Geminorum.		α Argus. (*Canopus*)	
	R. A.	Dec. *North.*	R. A.	Dec. *North.*	R. A.	Dec. *South.*
	h m	° ′	h m	° ′	h m	° ′
	5 47	7 22	6 14	22 35	6 20	52 36
	s s	″ ″	s s	″ ″	s s	″ ″
Jan. 1	19·88 0·04	36·9 0·8	11·84 0·08	5·1 0·1	45·99 0·03	61·1 3·3
11	19·92 0·00	36·1 0·6	11·92 0·02	5·2 0·2	45·96 0·10	64·4 3·1
21	19·92 0·05	35·5 0·6	11·94 0·02	5·4 0·2	45·86 0·17	67·5 2·8
31	19·87	34·9	11·92	5·6	45·69	70·3
	0·09	0·4	0·07	0·2	0·23	2·4
Feb. 10	19·78 0·12	34·5 0·3	11·85 0·12	5·8 0·3	45·46 0·28	72·7 1·9
20	19·66 0·15	34·2 0·2	11·73 0·14	6·1 0·2	45·18 0·31	74·6 1·4
Mar. 2	19·51 0·17	34·0 0·1	11·59 0·16	6·3 0·2	44·87 0·34	76·0 1·0
12	19·34	33·9	11·43	6·5	44·53	77·0
	0·17	0·1	0·18	0·1	0·36	0·4
22	19·17 0·16	34·0 0·1	11·25 0·18	6·6 0·1	44·17 0·36	77·4 0·1
Apr. 1	19·01 0·15	34·1 0·2	11·07 0·16	6·7 0·0	43·81 0·34	77·3 0·6
11	18·86 0·12	34·3 0·3	10·91 0·14	6·7 0·0	43·47 0·32	76·7 1·2
21	18·74	34·6	10·77	6·7	43·15	75·5
	0·09	0·5	0·12	0·1	0·29	1·6
May 1	18·65 0·06	35·1 0·6	10 65 0·07	6·6 0·1	42·86 0·24	73·9 2·0
11	18·59 0·02	35·7 0·7	10·58 0·04	6·5 0·0	42·62 0·20	71·9 2·4
21	18·57 0·03	36·4 0·8	10·54 0·01	6·5 0·1	42·42 0·14	69·5 2·7
31	18·60	37·2	10·55	6·4	42·28	66·8
	0·07	0·9	0·06	0·0	0·08	3·0
June 10	18·67 0·12	38·1 1·0	10·61 0·09	6·4 0·1	42·20 0·02	63·8 3·2
20	18·79 0·15	39·1 1·1	10·70 0·16	6·5 0·0	42·18 0·04	60·6 3·6
30	18·94 0·18	40·2 1·1	10·86 0·17	6·5 0·1	42·22 0·11	57·0 3·3
July 10	19·12	41·3	11·03	6·6	42·33	53·7
	0·22	1·1	0·22	0·2	0·16	3·2
20	19·34 0·24	42·4 1·0	11·25 0·24	6·8 0·2	42·49 0·22	50·5 3·1
30	19·58 0·26	43·4 1·0	11·49 0·27	7·0 0·2	42·71 0·27	47·4 2·8
Aug. 9	19·84 0·28	44·4 0·9	11·76 0·28	7·2 0·1	42·98 0·31	44·6 2·4
19	20·12	45·3	12·04	7·3	43·29	42·2
	0·29	0·7	0·30	0·1	0·35	1·9
29	20·41 0·29	46·0 0·5	12·34 0·32	7·4 0·1	43·64 0·37	40·3 1·4
Sept. 8	20·70 0·31	46·5 0·3	12·66 0·32	7·5 0·0	44·01 0·40	38·9 0·9
18	21·01 0·30	46·8 0·1	12·98 0·33	7·5 0·1	44·41 0·41	38·0 0·2
28	21·31	46·9	13·31	7·4	44·82	37·8
	0·30	0·2	0·33	0·1	0·41	0·4
Oct. 8	21·61 0·30	46·7 0·3	13·64 0·33	7·3 0·2	45·23 0·40	38·2 1·1
18	21·91 0·28	46·4 0·6	13·97 0·32	7·1 0·3	45·63 0·39	39·3 1·7
28	22·19 0·26	45·8 0·7	14·29 0·31	6·8 0·3	46·02 0·36	41·0 2·2
Nov. 7	22·45	45·1	14·60	6·5	46·38	
	0·25	0·9	0·29	0·3	0·32	
17	22·70 0·22	44·2 0·9	14·89 0·27	6·2 0·2	46·70 0·2	
27	22·92 0·19	43·3 1·0	15·16 0·23	6·0 0·2	46·97 0	
Dec. 7	23·11 0·15	42·3 0·9	15·39 0·20	5 8 0·2	47·18	
17	23·26	41·4	15·59	5·6 0·2	47·33	
	0·11	1·0	0·15	0·0		
27	23·37 0·07	40·4 0·8	15·74 0·11	5·6 0·0	47·4	
37	23·44	39·6	15·85	5·6	47·[illegible]	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS,
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	51 (Hev.) Cephei. R.A.		Dec. *North.*		α Canis Majoris. (*Sirius*) R.A.		Dec. *South.*		ε Canis Majoris. R.A.		Dec. *South.*	
	h m		° ′		h m		° ′		h m		° ′	
	6 30		87 14		6 38		16 30		6 52		28 46	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	86·60		74·9		46·36		70·4		56·58		35·0	
		0·36		3·4		0·07		2·2		0·07		2·9
11	86·96		78·3		46·43		72·6		56·65		37·9	
		0·54		3·2		0·01		2·1		0·01		2·6
21	86·42		81·5		46·44		74·7		56·66		40·5	
		1·43		3·0		0·03		1·9		0·03		2·4
31	84·99		84·5		46·41		76·6		56·63		42·9	
		2·23		2·7		0·07		1·6		0·09		2·1
Feb. 10	82·76		87·2		46·34		78·2		56·54		45·0	
		2·95		2·3		0·12		1·3		0·13		1·8
20	79·81		89·5		46·22		79·5		56·41		46·8	
		3·51		1·8		0·15		0·9		0·17		1·4
Mar. 2	76·30		91·3		46·07		80·4		56·24		48·2	
		3·92		1·3		0·17		0·7		0·19		0·9
12	72·38		92·6		45·90		81·1		56·05		49·1	
		4·16		0·7		0·18		0·3		0·21		0·6
22	68·22		93·3		45·72		81·4		55·84		49·7	
		4·22		0·1		0·19		0·0		0·21		0·1
Apr. 1	64·00		93·4		45·53		81·4		55·63		49·8	
		4·11		0·6		0·18		0·3		0·21		0·2
11	59·89		92·8		45·35		81·1		55·42		49·6	
		3·82		1·0		0·16		0·6		0·20		0·7
21	56·07		91·8		45·19		80·5		55·22		48·9	
		3·40		1·6		0·15		0·9		0·18		1·0
May 1	52·67		90·2		45·04		79·6		55·04		47·9	
		2·85		2·1		0·11		1·2		0·14		1·3
11	49·82		88·1		44·93		78·4		54·90		46·6	
		2·21		2·4		0·08		1·5		0·11		1·8
21	47·61		85·7		44·85		76·9		54·79		44·8	
		1·48		2·8		0·04		1·6		0·08		2·0
31	46·13		82·9		44·81		75·3		54·71		42·8	
		0·73		2·9		0·00		1·9		0·03		2·2
June 10	45·40		80·0		44·81		73·4		54·68		40·6	
		0·07		3·0		0·05		2·0		0·01		2·4
20	45·47		77·0		44·86		71·4		54·69		38·2	
		0·99		3·4	{44·93}	0·07	{69·4}	2·0		0·05		2·6
30	46·46		73·6		{44·94}		{69·3}		54·74		35·6	
		1·69		3·0		0·12		2·2		0·10		2·8
July 10	48·15		70·6		45·06		67·0		54·84		32·8	
		2·42		2·8		0·15		2·0		0·13		2·6
20	50·57		67·8		45·21		65·0		54·97		30·2	
		3·09		2·7		0·18		2·0		0·16		2·5
30	53·66		65·1		45·39		63·0		55·13		27·7	
		3·70		2·4		0·21		1·8		0·20		2·3
Aug. 9	57·36		62·7		45·60		61·2		55·33		25·4	
		4·23		2·1		0·23		1·6		0·23		2·0
19	61·59		60·6		45·83		59·6		55·56		23·4	
		4·67		1·7		0·26		1·3		0·26		1·7
29	66·26		58·9		46·09		58·3		55·82		21·7	
		5·04		1·4		0·27		0·9		0·27		1·3
Sept. 8	71·30		57·5		46·36		57·4		56·09		20·4	
		5·29		0·9		0·29		0·5		0·30		0·8
18	76·59		56·6		46·65		56·9		56·39		19·6	
		5·46		0·4		0·29		0·0		0·31		0·3
28	82·05		56·2		46·94		56·9		56·70		19·3	
		5·51		0·0		0·30		0·3		0·32		0·2
Oct. 8	87·56		56·2		47·24		57·2		57·02		19·5	
		5·46		0·4		0·30		0·8		0·31		0·8
18	93·02		56·6		47·54		58·0		57·33		20·3	
		5·28		1·0		0·30		1·3		0·32		1·3
28	98·30		57·6		47·84		59·3		57·65		21 6	
		4·99		1·5		0·29		1·6		0·31		1·7
Nov. 7	103·29		59·1		48·13		60·9		57·96		23·3	
		4·56		1·9		0·27		1·9		0·29		2·2
17	107·85		61·0		48·40		62·8		58·25		25·5	
		4·02		2·3		0·24		2·2		0·26		2·5
27	111·87		63·3		48·64		65·0		58·51		28·0	
		3·38		2·7		0·22		2·3		0·23		2·8
Dec. 7	115·25		66·0		48·86		67·3		58·74		30·8	
		2·59		2·9		0·18		2·5		0·19		2·9
17	117·84		68·9		49·04		69·8		58·93		33·7	
		1·78		3·2		0·14		2·4		0·15		2·9
27	119·62		72·1		49·18		72·2		59·08		36·6	
		0·87		3·2		0·10		2·3		0·09		2·9
37	120·49		75·3		49·28		74·5		59·17		39·5	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	δ Geminorum.				α² Geminorum. (*Castor*)				α Canis Minoris. (*Procyon*)			
	R. A.		Dec. *North.*		R. A.		Dec. *North.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	7 11		22 14		7 25		32 12		7 31		5 35	
Jan. 1	28·22	0·14	46·0	0·0	21·22	0·16	9·6	0·5	43·07	0·14	40·6	1·2
11	28·36	0·08	46·0	0·0	21·38	0·11	10·1	0·7	43·21	0·09	39·4	1·1
21	28·44	0·03	46·0	0·2	21·49	0·04	10·8	0·7	43·30	0·04	38·3	0·9
31	28·47		46·2		21·53		11·5		43·34		37·4	
		0·03		0·2		0·01		0·8		0·01		0·7
Feb. 10	28·44	0·07	46·4	0·4	21·52	0·06	12·3	0·9	43·33	0·06	36·7	0·5
20	28·37	0·10	46·8	0·3	21·46	0·11	13·2	0·8	43·27	0·09	36·2	0·3
Mar. 2	28·27	0·14	47·1	0·4	21·35	0·15	14·0	0·7	43·18	0·12	35·9	0·2
12	28·13		47·5		21·20		14·7		43·06		35·7	
		0·17		0·4		0·17		0·7		0·15		0·1
22	27·96	0·17	47·9	0·3	21·03	0·18	15·4	0·4	42·91	0·16	35·6	0·1
Apr. 1	27·79	0·16	48·2	0·2	20·85	0·19	15·8	0·4	42·75	0·16	35·7	0·2
11	27·63	0·16	48·4	0·2	20·66	0·18	16·2	0·1	42·59	0·15	35·9	0·3
21	27·47		48·6		20·48		16·3		42·44		36·2	
		0·14		0·1		0·15		0·0		0·14		0·4
May 1	27·33	0·11	48·7	0·1	20·33	0·13	16·3	0·1	42·30	0·11	36·6	0·5
11	27·22	0·07	48·8	0·0	20·20	0·09	16·2	0·3	42·19	0·09	37·1	0·5
21	27·15	0·04	48·8	0·0	20·11	0·06	15·9	0·4	42·10	0·05	37·6	0·7
31	27·11		48·8		20·05		15·5		42·05		38·3	
		0·00		0·1		0·01		0·6		0·02		0·7
June 10	27·11	0·05	48·7	0·0	20·04	0·03	14·9	0·6	42·03	0·02	39·0	0·7
20	27·16	0·09	48·7	0·0	20·07	0·07	14·3	0·6	42·05	0·05	39·7	0·8
30	27·25	0·12	48·7	0·1	20·14	0·11	13·7	0·7	42·10	0·08	40·5	0·9
July 10	27·37		48·6		20·25		13·0		42·18		41·4	
		0·16		0·1	12	0·17		0·8	13	0·13		0·8
20	27·53	0·19	48·5	0·1	20·42	0·19	12·2	0·7	42·31	0·15	42·2	0·7
30	27·72	0·22	48·4	0·1	20·61	0·23	11·5	0·8	42·46	0·18	42·9	0·7
Aug. 9	27·94	0·24	48·3	0·2	20·84	0·25	10·7	0·7	42·64	0·20	43·6	0·5
19	28·18		48·1		21·09		10·0		42·84		44·1	
		0·26		0·3		0·28		0·8		0·23		0·4
29	28·44	0·29	47·8	0·3	21·37	0·30	9·2	0·8	43·07	0·25	44·5	0·1
Sept. 8	28·73	0·30	47·5	0·4	21·67	0·32	8·4	0·8	43·32	0·26	44·6	0·1
18	29·03	0·32	47·1	0·5	21·99	0·34	7·6	0·8	43·58	0·29	44·5	0·3
28	29·35		46·6		22·33		6·8		43·87		44·2	
		0·33		0·6		0·35		0·8		0·29		0·5
Oct. 8	29·68	0·33	46·0	0·6	22·68	0·36	6·0	0·7	44·16	0·31	43·7	0·8
18	30·01	0·34	45·4	0·7	23·04	0·37	5·3	0·7	44·47	0·31	42·9	1·0
28	30·35	0·33	44·7	0·7	23·41	0·37	4·6	0·6	44·78	0·31	41·9	1·2
Nov. 7	30·68		44·0		23·78		4·0		45·09		40·7	
		0·33		0·8		0·36		0·5		0·31		
17	31·01	0·31	43·2	0·6	24·14	0·34	3·5	0·3	45·40	0·29		
27	31·32	0·28	42·6	0·6	24·48	0·32	3·2	0·2	45·69	0·2		
Dec. 7	31·60	0·25	42·0	0·4	24·80	0·28	3·0	0·0	45·96	0·		
17	31·85		41·6		25·08		3·0		46·21			
		0·21		0·4		0·24		0·2				
27	32·06	0·16	41·2	0·1	25·32	0·20	3·2	0·4	46·41			
37	32·22		41·1		25·52		3·6		46·58			

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	β Geminorum. (*Pollux*)				15 Argus.				ε Hydræ.			
	R. A.		Dec. *North.*		R. A.		Dec. *South.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	7 36		28 22		8 1		23 53		8 39		6 56	
Jan. 1	26·88	0·18	23·2	0·2	22·84	0·15	12·0	2·8	6·11	0·20	56·7	1·4
11	27·06	0·11	23·4	0·4	22·99	0·09	14·8	2·7	6·31	0·16	55·3	1·1
21	27·17	0·05	23·8	0·5	23·08	0·05	17·5	2·6	6·47	0·10	54·2	1·0
31	27·22		24·3		23·13		20·1		6·57		53·2	
		0·00		0·6		0·01		2·3		0·06		0·7
Feb. 10	27·22	0·04	24·9	0·7	23·12	0·06	22·4	2·0	6·63	0·01	52·5	0·5
20	27·18	0·10	25·6	0·7	23·06	0·10	24·4	1·7	6·64	0·04	52·0	0·4
Mar. 2	27·08	0·14	26·3	0·6	22·96	0·14	26·1	1·3	6·60	0·08	51·6	0·1
12	26·94		26·9		22·82		27·4		6·52		51·5	
		0·16		0·6		0·16		1·0		0·10		0·0
22	26·78	0·17	27·5	0·5	22·66	0·18	28·4	0·7	6·42	0·13	51·5	0·1
Apr. 1	26·61	0·18	28·0	0·4	22·48	0·19	29·1	0·3	6·29	0·14	51·6	0·2
11	26·43	0·17	28·4	0·2	22·29	0·18	29·4	0·1	6·15	0·15	51·8	0·4
21	26·26		28·6		22·11		29·3		6·00		52·2	
		0·15		0·2		0·17		0·5		0·14		0·4
May 1	26·11	0·13	28·8	0·0	21·94	0·16	28·8	0·7	5·86	0·12	52·6	0·5
11	25·98	0·10	28·8	0·1	21·78	0·13	28·1	1·1	5·74	0·11	53·1	0·5
21	25·88	0·06	28·7	0·3	21·65	0·11	27·0	1·4	5·63	0·08	53·6	0·5
31	25·82		28·4		21·54		25·6		5·55		54·1	
		0·02		0·3		0·07		1·7		0·06		0·6
June 10	25·80	0·02	28·1	0·4	21·47	0·04	23·9	1·9	5·49	0·03	54·7	0·6
20	25·82	0·06	27·7	0·4	21·43	0·01	22·0	2·0	5·46	0·01	55·3	0·6
30	25·88	0·09	27·3	0·5	21·42	0·03	20·0	2·1	5·45	0·03	55·9	0·6
July 10	25·97		26·8		21·45		17·9		5·48		56·5	
		0·15		0·6		0·06		2·2		0·06		0·5
20	26·12	0·18	26·2	0·6	21·51	0·11	15·7	2·4	5·54	0·09	57·0	0·5
30	26·30	0·20	25·6	0·6	21·62	0·14	13·3	2·1	{5·63 / 5·64}	0·11	{57·5 / 57·6}	0·4
Aug. 9	26·50	0·23	25·0	0·6	21·76	0·16	11·2	1·9	5·75	0·15	58·0	0·2
19	26·73		24·4		21·92		9·3		5·90		58·2	
		0·26		0·7		0·20		1·7		0·17		0·1
29	26·99	0·28	23·7	0·7	22·12	0·22	7·6	1·3	6·07	0·20	58·3	0·1
Sept. 8	27·27	0·30	23·0	0·8	22·34	0·25	6·3	1·0	6·27	0·23	58·2	0·3
18	27·57	0·32	22·2	0·8	22·59	0·28	5·3	0·5	6·50	0·25	57·9	0·5
28	27·89		21·4		22·87		4·8		6·75		57·4	
		0·34		0·9		0·29		0·0		0·27		0·8
Oct. 8	28·23	0·35	20·5	0·8	23·16	0·31	4·8	0·5	7·02	0·29	56·6	1·0
18	28·58	0·36	19·7	0·9	23·47	0·32	5·3	0·9	7·31	0·31	55·6	1·2
28	28·94	0·35	18·8	0·7	23·79	0·33	6·2	1·5	7·62	0·32	54·4	1·4
Nov. 7	29·29		18·1		24·12		7·7		7·94		53·0	
		0·35		0·8		0·32		1·8		0·33		1·5
17	29·64	0·34	17·3	0·5	24·44	0·30	9·5	2·2	8·27	0·32	51·5	1·6
27	29·98	0·31	16·8	0·5	24·74	0·29	11·7	2·6	8·59	0·31	49·9	1·7
Dec. 7	30·29	0·28	16·3	0·3	25·03	0·26	14·3	2·7	8·90	0·30	48·2	1·7
17	30·57		16·0		25·29		17·0		9·20		46·5	
		0·24		0·1		0·21		2·8		0·26		1·5
27	30·81	0·20	15·9	0·1	25·50	0·18	19·8	2·9	9·46	0·23	45·0	1·5
37	31·01		16·0		25·68		22·7		9·69		43·5	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	ι Ursæ Majoris.		ι Argus.		α Hydræ.	
	R. A.	Dec. *North.*	R. A.	Dec. *South.*	R. A.	Dec. *South.*
	h m s 8 49	° ′ ″ 48 36	h m s 9 13	° ′ ″ 58 39	h m s 9 20	° ′ ″ 8 1
Jan. 1	16·47	24·9	13·73	46·1	27·94	49·3
11	16·77 0·30	25·9 1·0	13·99 0·26	49·7 3·6	28·17 0·23	51·6 2·3
21	17·01 0·24	27·2 1·3	14·18 0·19	53·4 3·7	28·35 0·18	53·7 2·1
31	17·17 0·16	28·7 1·5	14·28 0·10	57·2 3·8	28·49 0·14	55·6 1·9
	0·10	1·7	0·02	3·7	0·09	1·7
Feb. 10	17·27 0·02	30·4 1·9	14·30 0·06	60·9 3·6	28·58 0·04	57·3 1·6
20	17·29 0·05	32·3 1·8	14·24 0·13	64·5 3·3	28·62 0·01	58·9 1·2
Mar. 2	17·24 0·11	34·1 1·7	14·11 0·20	67·8 3·1	28·61 0·05	60·1 1·0
12	17·13 0·16	35·8 1·6	13·91 0·26	70·9 2·6	28·56 0·08	61·1 0·8
22	16·97 0·20	37·4 1·4	13·65 0·30	73·5 2·3	28·48 0·11	61·9 0·5
Apr. 1	16·77 0·22	38·8 1·1	13·35 0·33	75·8 1·7	28·37 0·12	62·4 0·2
11	16·55 0·23	39·9 0·8	13·02 0·36	77·5 1·3	28·25 0·13	62·6 0·0
21	16·32 0·23	40·7 0·5	12·66 0·36	78·8 0·8	28·12 0·14	62·6 0·1
May 1	16·09 0·21	41·2 0·1	12·30 0·36	79·6 0·3	27·98 0·13	62·5 0·4
11	15·88 0·19	41·3 0·3	11·94 0·35	79·9 0·3	27·85 0·12	62·1 0·6
21	15·69 0·16	41·0 0·5	11·59 0·33	79·6 0·7	27·73 0·11	61·5 0·7
31	15·53 0·12	40·5 0·9	11·26 0·31	78·9 1·2	27·62 0·08	60·8 0·9
June 10	15·41 0·08	39·6 1·1	10·95 0·27	77·7 1·7	27·54 0·07	59·9 1·0
20	15·33 0·04	38·5 1·4	10·68 0·22	76·0 2·0	27·47 0·04	58·9 1·1
30	15·29 0·01	37·1 1·6	10·46 0·18	74·0 2·5	27·43 0·01	57·8 1·1
July 10	15·30 0·06	35·5 1·8	10·28 0·12	71·5 2·7	27·42 0·01	56·7 1·2
20	15·36 0·11	33·7 1·9	10·16 0·06	68·8 2·8	27·43 0·04	55·5 1·2
30	15·47 0·16	31·8 2·2	10·10 0·00	66·0 3·3	27·47 0·06	54·3 1·1
Aug. 9	15·63 0·20	29·6 2·1	10·10 0·07	62·7 3·0	27·53 0·11	53·2 1·1
19	15·83 0·24	27·5 2·2	10·17 0·14	59·7 2·9	27·64 0·12	52·1 0·9
29	16·07 0·27	25·3 2·1	10·31 0·20	56·8 2·6	27·76 0·16	51·2 0·6
Sept. 8	16·34 0·32	23·2 2·1	10·51 0·27	54·2 2·3	27·92 0·18	50·6 0·4
18	16·66 0·35	21·1 2·0	10·78 0·33	51·9 1·9	28·10 0·22	50·2 0·0
28	17·01 0·39	19·1 1·9	11·11 0·39	50·0 1·4	28·32 0·24	50·2 0·3
Oct. 8	17·40 0·42	17·2 1·7	11·50 0·43	48·6 0·9	28·56 0·27	50·5 0·6
18	17·82 0·43	15·5 1·6	11·93 0·47	47·7 0·2	28·83 0·30	51·1 1·0
28	18·25 0·46	13·9 1·3	12·40 0·49	47·5 0·5	29·13 0·31	52·1 1·3
Nov. 7	18·71 0·47	12·6 1·0	12·89 0·50	48·0 1·1	29·44 0·32	
17	19·18 0·46	11·6 0·7	13·39 0·49	49·1 1·8	29·76	
27	19·64 0·45	10·9 0·3	13·88 0·47	50·9 2·3	30·09	
Dec. 7	20·09 0·42	10·6 0·0	14·35 0·43	53·2 2·8	30	
17	20·51 0·38	10·6 0·4	14·78 0·37	56·0 3·2	30	
27	20·89 0·34	11·0 0·8	15·15 0·30	59·2 3·5		
37	21·23	11·8	15·45	62·7		

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	θ Ursæ Majoris.				ε Leonis.				α Leonis. (*Regulus*)		
	R. A.		Dec. *North.*		R. A.		Dec. *North.*		R. A.		Dec.
	h m		° ′		h m		° ′		h m		
	9 23		52 19		9 37		24 26		10 0		12
	s		″		s		″		s		″
Jan. 1	9·02	s	62·6	″	37·15	s	22·3	″	38·90	s	28·
11	9·38	0·36	63·5	0·9	37·42	0·27	21·6	0·7	39·17	0·27	27·
21	9·68	0·30	64·7	1·2	37·66	0·24	21·2	0·4	39·41	0·24	25·
31	9·90	0·22	66·3	1·6	37·84	0·18	21·2	0·0	39·60	0·19	25·
		0·14		1·8		0·13		0·2		0·14	
Feb. 10	10·04	0·07	68·1	2·0	37·97	0·07	21·4	0·4	39·74	0·09	24·
20	10·11	0·01	70·1	2·1	38·04	0·02	21·8	0·6	39·83	0·05	24·
Mar. 2	10·10	0·08	72·2	2·0	38·06	0·02	22·4	0·8	39·88	0·00	24·
12	10·02		74·2		38·04		23·2		39·88		24·
		0·13		1·9		0·07		0·9		0·05	
22	9·89		76·1		37·97		24·1		39·83		24·
Apr. 1	9·71	0·18	77·8	1·7	37·88	0·09	25·0	0·9	39·76	0·07	24·
11	9·49	0·22	79·3	1·5	37·76	0·12	25·9	0·9	39·66	0·10	25·
21	9·25	0·24	80·4	1·1	37·62	0·14	26·7	0·8	39·55	0·11	25·
		0·25		0·8		0·14		0·7		0·12	
May 1	9·00	0·24	81·2	0·4	37·48	0·14	27·4	0·6	39·43	0·12	26·
11	8·76	0·23	81·6	0·0	37·34	0·12	28·0	0·4	39·31	0·11	27·
21	8·53	0·20	81·6	0·4	37·22	0·12	28·4	0·3	39·20	0·11	27·
31	8·33		81·2		37·10		28·7		39·09		28·
		0·17		0·8		0·09		0·2		0·09	
June 10	8·16	0·13	80·4	1·1	37·01	0·07	28·9	0·0	39·00	0·08	28·
20	8·03	0·09	79·3	1·4	36·94	0·04	28·9	0·2	38·92	0·05	29·
30	7·94	0·05	77·9	1·7	36·90	0·02	28·7	0·3	38·87	0·03	29·
July 10	7·89		76·2		36·88		28·4		38·84		29·
		0·01		1·9		0·01		0·5		0·01	
20	7·90	0·05	74·3	2·1	36·89	0·04	27·9	0·6	38·83	0·01	29·
30	7·95	0·10	72·2	2·3	36·93	0·07	27·3	0·7	38·84	0·04	29·
Aug. 9	8·05	0·16	69·9	2·6	37·00	0·11	26·6	0·9	38·88	0·07	29·
" 19	8·21		67·3		" 37·11		25·7		38·95		29·
		0·20		2·5		0·13		1·1	"	0·10	
29	8·41		64·8		37·24		24·6		39·05		28·
Sept. 8	8·65	0·24	62·3	2·5	37·40	0·16	23·4	1·2	39·18	0·13	28·
18	8·94	0·29	59·8	2·5	37·59	0·19	22·0	1·4	39·34	0·16	27·
28	9·27	0·33	57·3	2·5	37·82	0·23	20·5	1·5	39·53	0·19	26·
		0·37		2·3		0·25		1·6		0·22	
Oct. 8	9·64	0·41	55·0	2·2	38·07	0·29	18·9	1·7	39·75	0·25	25·
18	10·05	0·45	52·8	2·0	38·36	0·31	17·2	1·8	40·00	0·28	23·
28	10·50	0·47	50·8	1·7	38·67	0·34	15·4	1·8	40·28	0·31	22·
Nov. 7	10·97		49·1		39·01		13·6		40·59		20·
		0·49		1·4		0·35		1·7		0·32	
17	11·46		47·7		39·36		11·9		40·91		18·
27	11·96	0·50	46·6	1·1	39·72	0·36	10·2	1·7	41·25	0·34	16·
Dec. 7	12·45	0·49	46·0	0·6	40·08	0·36	8·6	1·6	41·60	0·35	14·
17	12·92	0·47	45·8	0·2	40·43	0·35	7·3	1·3	41·93	0·33	13·
		0·44		0·2		0·33		1·2		0·32	
27	13·36	0·39	46·0	0·7	40·76	0·30	6·1	0·9	42·25	0·30	11·
37	13·75		46·7		41·06		5·2		42·55		9·

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	η Argus.				α Ursæ Majoris.				δ Leonis.			
	R. A.		Dec. *South.*		R. A.		Dec. *North.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	10 39		58 55		10 54		62 31		11 6		21 18	
Jan. 1		26·94		0·8		45·67		46·6		23·41		60·2
		0·41		3·1		0·56		0·4		0·33		1·4
11		27·35		3·9		46·23		47·0		23·74		58·8
		0·34		3·4		0·50		0·9		0·29		1·0
21		27·69		7·3		46·73		47·9		24·03		57·8
		0·28		3·7		0·43		1·4		0·26		0·6
31		27·97		11·0		47·16		49·3		24·29		57·2
		0·20		3·7		0·35		1·9		0·21		0·4
Feb. 10		28·17		14·7		47·51		51·2		24·50		56·8
		0·12		3·7		0·25		2·2		0·17		0·0
20		28·29		18·4		47·76		53·4		24·67		56·8
		0·04		3·7		0·16		2·4		0·11		0·4
Mar. 2		28·33		22·1		47·92		55·8		24·78		57·2
		0·03		3·5		0·06		2·6		0·07		0·6
12		28·30		25·6		47·98		58·4		24·85		57·8
		0·09		3·3		0 02		2·7		0·03		0·8
22		28·21		28·9		47·96		61·1		24·88		58·6
		0·15		3·0		0·11		2·5		0·02		0·9
Apr. 1		28·06		31·9		47·85		63·6		24·86		59·5
		0·21		2·7		0·19		2·4		0·05		1·0
11		27·85		34·6		47·66		66·0		24·81		60·5
		0·24		2·2		0·24		2·0		0·07		1·1
21		27·61		36·8		47·42		68·0		24·74		61·6
		0·28		1·8		0·28		1·8		0·09		1·0
May 1		27·33		38·6		47·14		69·8		24·65		62·6
		0·30		1·4		0·31		1·3		0·11		1·0
11		27·03		40·0		46·83		71·1		24·54		63·6
		0·31		0·9		0·33		0·9		0·11		0·8
21		26·72		40·9		46·50		72·0		24·43		64·4
		0·31		0·4		0·33		0·4		0·11		0·7
31		26·41		41·3		46·17		72·4		24·32		65·1
		0·32		0·1		0·32		0·1		0·11		0·6
June 10		26·09		41·2		45·85		72·3		24·21		65·7
		0·31		0·6		0·29		0·6		0·09		0·4
20		25·78		40·6		45·56		71·7		24·12		66·1
		0·28		1·1		0·27		1·0		0·09		0·1
30		25·50		39·5		45·29		70·7		24·03		66·2
		0·26		1·6		0·24		1·5		0·08		0·0
July 10		25·24		37·9		45·05		69·2		23·95		66·2
		0·23		1·9		0·19		1·9		0·06		0·1
20		25·01		36·0		44·86		67·3		23·89		66·1
		0·19		2·3		0·14		2·2		0·04		0·4
30		24·82		33·7		44·72		65·1		23·85		65·7
		0·13		2·5		0·08		2·6		0·02		0·6
Aug. 9		24·69		31·2		44·64		62·5		23·83		65·1
		0·08		2·7		0·03		2·8		0·00		0·9
19		24·61		28·5		44·61		59·7		23·83		64·2
		0·02		2·8		0·03		3·1		0·03		1·0
29		24·59		25·7		44·64		56·6		23·86		63·2
		0·06		3·0		0·10		3·5		0·06		1·2
Sept. 8		24·65		22·7		44·74		53·1		0·09		1·5
		0·13		2·7		0·16		3·4				
18		24·78		20·0		44·90		49·7		24·02		60·4
		0·21		2·4		0·24		3·3		0·13		1·6
28		24·99		17·6		45·14		46·4		24·15		58·8
		0·27		2·0		0·30		3·3		0·17		1·9
Oct. 8		25·26		15·6		45·44		43·1		24·32		56·9
		0·35		1·6		0·37		3·3		0·21		2·0
18		25·61		14·0		45·81		39·8		24·53		54·9
		0·40		1·1		0·43		3·0		0·24		2·1
28		26·01		12·9		46·24		36·8		24·77		52·8
		0·46		0·5		0·49		2·8		0·28		2·3
Nov. 7		26·47		12·4		46·73		34·0		25·05		50·5
		0·50		0·1		0·54		2·5		0·31		2·2
17		26·97		12·5		47·27		31·5		25·36		
		0·52		0·8		0·59		2·1		0·3		3
27		27·49		13·3		47·86		29·4		25·70		
		0·52		1·3		0·61		1·6		0		
Dec. 7		28·01		14·6		48·47		27·8		26·05		
		0·51		2·0		0·62		1·1				
17		28·52		16·6		49·09		26·7		26·4		
		0·49		2·5		0·61		0·5				8
27		29·01		19·1		49·70		26·2				
		0·44		2·9		0·58		0·1				
37		29·45		22·0		50·28		26·3				

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	δ Hydræ et Crateris.				β Leonis.				γ Ursæ Majoris.			
	R. A.		Dec. *South.*		R. A.		Dec. *North.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	11 12		13 59		11 41		15 22		11 46		54 29	
Jan. 1	5·30	0·30	31·5	2·4	39·30	0·33	55·4	1·7	11·32	0·49	51·4	0·6
11	5·60	0·28	33·9	2·4	39·63	0·31	53·7	1·5	11·81	0·46	50·8	0·0
21	5·88	0·24	36·3	2·3	39·94	0·27	52·2	1·1	12·27	0·41	50·8	0·6
31	6·12		38·6		40·21		51·1		12·68		51·4	
		0·20		2·2		0·23		0·7		0·36		1·1
Feb. 10	6·32	0·15	40·8	2·0	40·44	0·19	50·4	0·5	13·04	0·29	52·5	1·6
20	6·47	0·11	42·8	1·8	40·63	0·15	49·9	0·1	13·33	0·22	54·1	1·9
Mar. 2	6·58	0·06	44·6	1·6	40·78	0·10	49·8	0·2	13·55	0·14	56·0	2·3
12	6·64		46·2		40·88		50·0		13·69		58·3	
		0·02		1·3		0·06		0·5		0·07		2·4
22	6·66	0·01	47·5	1·1	40·94	0·02	50·5	0·6	13·76	0·01	60·7	2·5
Apr. 1	6·65	0·04	48·6	0·8	40·96	0·02	51·1	0·8	13·77	0·06	63·2	2·4
11	6·61	0·06	49·4	0·5	40·94	0·04	51·9	0·9	13·71	0·12	65·6	2·3
21	6·55		49·9		40·90		52·8		13·59		67·9	
		0·08		0·4		0·06		0·9		0·16		2·1
May 1	6·47	0·10	50·3	0·1	40·84	0·08	53·7	0·9	13·43	0·19	70·0	1·9
11	6·37	0·10	50·4	0·1	40·76	0·09	54·6	0·9	13·24	0·21	71·9	1·4
21	6·27	0·11	50·3	0·3	40·67	0·10	55·5	0·8	13·03	0·23	73·3	1·0
31	6·16		50·0		40·57		56·3		12·80		74·3	
		0·10		0·5		0·09		0·7		0·24		0·6
June 10	6·06	0·10	49·5	0·6	40·48	0·10	57·0	0·6	12·56	0·23	74·9	0·2
20	5·96	0·09	48·9	0·8	40·38	0·10	57·6	0·4	12·33	0·23	75·1	0·3
30	5·87	0·09	48·1	0·9	40·28	0·09	58·0	0·3	12·10	0·21	74·8	0·7
July 10	5·78		47·2		40·19		58·3		11·89		74·1	
		0·07		1·0		0·08		0·0		0·19		1·1
20	5·71	0·05	46·2	1·1	40·11	0·06	58·3	0·0	11·70	0·16	72·9	1·6
30	5·66	0·04	45·1	1·1	40·05	0·05	58·3	0·3	11·54	0·13	71·3	2·0
Aug. 9	5·62	0·01	44·0	1·1	40·00	0·03	58·0	0·5	11·41	0·10	69·3	2·3
19	5·61		42·9		39·97		57·5		11·31		67·0	
		0·01		0·9		0·01		0·6		0·05		2·6
29	5·62	0·04	42·0	0·9	39·96	0·02	56·9	0·9	11·26	0·01	64·4	2·8
Sept. 8	5·66	0·08	41·1	0·7	39·98	0·05	56·0	1·1	11·25	0·04	61·6	3·1
18	5·74	0·12	40·4	0·4	{40·03 / 40·04}	0·09	{54·8 / 54·7}	1·3	11·29	0·11	58·5	3·6
28	5·86		40·0		40·13		53·4		11·40		54·9	
		0·16		0·1		0·12		1·6		0·16		3·4
Oct. 8	6·02	0·19	39·9	0·2	40·25	0·17	51·8	1·8	11·56	0·22	51·5	3·4
18	6·21	0·23	40·1	0·6	40·42	0·21	50·0	2·0	11·78	0·28	48·1	3·3
28	6·44	0·27	40·7	0·9	40·63	0·24	48·0	2·2	12·06	0·34	44·8	3·2
Nov. 7	6·71		41·6		40·87		45·8		12·40		41·6	
		0·30		1·3		0·28		2·2		0·39		3·0
17	7·01	0·33	42·9	1·7	41·15	0·31	43·6	2·3	12·79	0·44	38·6	2·7
27	7·34	0·33	44·6	1·9	41·46	0·34	41·3	2·3	13·23	0·47	35·9	2·4
Dec. 7	7·67	0·34	46·5	2·1	41·80	0·34	39·0	2·2	13·70	0·50	33·5	1·9
17	8·01		48·6		42·14		36·8		14·20		31·6	
		0·34		2·3		0·35		2·1		0·51		1·4
27	8·35	0·33	50·9	2·5	42·49	0·34	34·7	1·9	14·71	0·50	30·2	0·9
37	8·68		53·4		42·83		32·8		15·21		29·3	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS,
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	β Chamæleontis.				α¹ Crucis.				β Corvi.			
	R. A.		Dec. *South.*		R. A.		Dec. *South.*		R. A.		Dec. *South.*	
	h m		° ′		h m		° ′		h m		° ′	
	12 9		78 30		12 18		62 17		12 26		22 35	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	54·35	1·15	1·2	1·9	32·59	0·57	17·5	2·1	45·73	0·35	29·5	2·3
11	55·50	1·06	3·1	2·4	33·16	0·53	19·6	2·5	46·08	0·32	31·8	2·4
21	56·56	0·94	5·5	2·9	33·69	0·47	22·1	2·9	46·40	0·30	34·2	2·4
31	57·50		8·4		34·16		25·0		46·70		36·6	
		0·81		3·2		0·42		3·2		0·27		2·4
Feb. 10	58·31		11·6		34·58		28·2		46·97		39·0	
20	58·97	0·66	15·1	3·5	34·93	0·35	31·6	3·4	47·20	0·23	41·4	2·4
Mar. 2	59·46	0·49	18·9	3·8	35·20	0·27	35·2	3·6	47·39	0·19	43·6	2·2
12	59·79	0·33	22·8	3·9	35·40	0·20	38·7	3·5	47·54	0·15	45·6	2·0
		0·15		3·8		0·12		3·6		0·10		1·8
22	59·94	0·01	26·6	3·9	35·52	0·06	42·3	3·4	47·64	0·07	47·4	1·7
Apr. 1	59·93	0·17	30·5	3·7	35·58	0·02	45·7	3·3	47·71	0·04	49·1	1·4
11	59·76	0·32	34·2	3·4	35·56	0·07	49·0	3·1	47·75	0·00	50·5	1·1
21	59·44		37·6		35·49		52·1		47·75		51·6	
		0·45		3·2		0·13		2·7		0·02		0·9
May 1	58·99	0·58	40·8	2·9	35·36	0·18	54·8	2·4	47·73	0·05	52·5	0·7
11	58·41	0·69	43·7	2·4	35·18	0·23	57·2	2·0	47·68	0·06	53·2	0·5
21	57·72	0·78	46·1	2·0	34·95	0·26	59·2	1·6	47·62	0·08	53·7	0·3
31	56·94		48·1		34·69		60·8		47·54		54·0	
		0·85		1·5		0·29		1·2		0·09		0·0
June 10	56·09	0·91	49·6	0·9	34·40	0·32	62·0	0·6	47·45	0·10	54·0	0·3
20	55·18	0·95	50·5	0·5	34·08	0·33	62·6	0·2	47·35	0·11	53·7	0·4
30	54·23	0·94	51·0	0·1	33·75	0·34	62·8	0·3	47·24	0·11	53·3	0·6
July 10	53·29		50·9		33·41		62·5		47·13		52·7	
		0·92		0·7		0·33		0·8		0·11		0·8
20	52·37	0·87	50·2	1·2	33·08	0·32	61·7	1·2	47·02	0·10	51·9	0·9
30	51·50	0·79	49·0	1·7	32·76	0·29	60·5	1·7	46·92	0·10	51·0	1·1
Aug. 9	50·71	0·68	47·3	2·1	32·47	0·25	58·8	2·0	46·82	0·08	49·9	1·1
19	50·03		45·2		32·22		56·8		46·74		48·8	
		0·54		2·5		0·20		2·3		0·07		1·1
29	49·49	0·38	42·7	2·7	32·02	0·13	54·5	2·6	46·67	0·03	47·7	1·2
Sept. 8	49·11	0·20	40·0	2·9	31·89	0·06	51·9	2·6	46·64	0·00	46·5	1·0
18	48·91	0·02	37·1	3·3	31·83	c·02	49·3	2·6	46·64	0·03	45·5	0·9
28	48·93		33·8		{31·85 / 31·86}		{46·7 / 46·4}		46·67		44·6	
		0·22		2·9		0·12		2·5		0·09		0·8
Oct. 8	49·15	0·43	30·9	2·7	31·98	0·21	43·9	2·3	46·76	0·13	43·8	0·3
18	49·58	0·63	28·2	2·4	32·19	0·29	41·6	2·0	46·89	0·18	43·5	0·1
28	50·21	0·81	25·8	2·0	32·48	0·38	39·6	1·6	47·07	0·22	43·4	0·3
Nov. 7	51·02		23·8		32·86		38·0		47·29		43·7	
		0·97		1·5		0·46		1·0		0·26		0·6
17	51·99	1·09	22·3	1·0	33·32	0·52	37·0	0·5	47·55	0·31	44·3	1·0
27	53·08	1·17	21·3	0·3	33·84	0·56	36·5	0·0	47·86	0·33	45·3	1·1
Dec. 7	54·25	1·22	21·0	0·4	34·40	0·59	36·5	0·7	48·19	0·35	46·7	
17	55·47		21·4		34·99		37·2		48·54		48·	
		1·23		1·0		0·60		1·3		0·36		
27	56·70	1·18	22·4	1·5	35·59	0·58	38·5	1·8	48·90	0·35	50	
37	57·88		23·9		36·17		40·3		49·25		52	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	12 Canum Venaticorum.				α Virginis. (*Spica*)				η Ursæ Majoris.			
	R. A.		Dec. *North.*		R. A.		Dec. *South.*		R. A.		Dec. *North.*	
	h m		° ′		h m		° ′		h m		° ′	
	12 49		39 5		13 17		10 24		13 41		50 1	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	13·77	0·40	58·1	1·6	32·45	0·34	6·4	2·1	48·59	0·45	64·0	2·0
11	14·17	0·39	56·5	1·2	32·79	0·33	8·5	2·1	49·04	0·45	62·0	1·4
21	14·56	0·36	55·3	0·6	33·12	0·31	10·6	2·0	49·49	0·44	60·6	0·8
31	14·92		54·7		33·43		12·6		49·93		59·8	
		0·33		0·0		0·30		1·9		0·41		0·2
Feb. 10	15·25	0·29	54·7	0·4	33·73	0·26	14·5	1·7	50·34	0·38	59·6	0·4
20	15·54	0·25	55·1	0·9	33·99	0·23	16·2	1·6	50·72	0·34	60·0	1·0
Mar. 2	15·79	0·19	56·0	1·3	34·22	0·19	17·8	1·3	51·06	0·28	61·0	1·5
12	15·98		57·3		34·41		19·1		51·34		62·2	
		0·15		1·7		0·16		1·1		0·23		1·9
22	16·13	0·09	59·0	1·9	34·57	0·12	20·2	0·9	51·57	0·17	64·4	2·3
Apr. 1	16·22	0·05	60·9	2·1	34·69	0·09	21·1	0·6	51·74	0·11	66·7	2·5
11	16·27	0·00	63·0	2·1	34·78	0·05	21·7	0·5	51·85	0·06	69·2	2·6
21	16·27		65·1		34·83		22·2		51·91		71·8	
		0·04		2·1		0·03		0·2		0·01		2·6
May 1	16·23	0·07	67·2	2·0	34·86	0·01	22·4	0·1	51·92	0·04	74·4	2·5
11	16·16	0·09	69·2	1·8	34·87	0·02	22·5	0·0	51·88	0·09	76·9	2·4
21	16·07	0·12	71·0	1·5	34·85	0·03	22·5	0·2	51·79	0·12	79·3	2·1
31	15·95		72·5		34·82		22·3		51·67		81·4	
		0·13		1·3		0·06		0·2		0·16		1·8
June 10	15·82	0·14	73·8	0·9	34·76	0·07	22·1	0·4	51·51	0·18	83·2	1·5
20	15·68	0·16	74·7	0·6	34·69	0·09	21·7	0·4	51·33	0·21	84·7	1·0
30	15·52	0·15	75·3	0·2	34·60	0·09	21·3	0·5	51·12	0·22	85·7	0·6
July 10	15·37		75·5		34·51		20·8		50·90		86·3	
		0·16		0·2		0·10		0·5		0·23		0·1
20	15·21	0·15	75·3	0·5	34·41	0·11	20·3	0·6	50·67	0·23	86·4	0·4
30	15·06	0·14	74·8	1·0	34·30	0·11	19·7	0·6	50·44	0·23	86·0	0·8
Aug. 9	14·92	0·12	73·8	1·3	34·19	0·10	19·1	0·6	50·21	0·22	85·2	1·2
19	14·80		72·5		34·09		18·5		49·99		84·0	
		0·10		1·6		0·08		0·5		0·20		1·7
29	14·70	0·07	70·9	2·0	34·01	0·07	18·0	0·5	49·79	0·18	82·3	2·1
Sept. 8	14·63	0·04	68·9	2·3	33·94	0·05	17·5	0·3	49·61	0·14	80·2	2·5
18	14·59	0·01	66·6	2·6	33·89	0·01	17·2	0·1	49·47	0·10	77·7	2·8
28	14·58		64·0		33·88		17·1		49·37		74·9	
	6	0·05		3·1		0·03		0·0		0·05		3·1
Oct. 8	14·63	0·10	60·9	3·0	33·91	0·07	17·1	0·3	49·32	0·00	71·8	3·3
18	14·73	0·15	57·9	3·1	33·98	0·12	17·4	0·5	49·32	0·08	68·5	3·9
28	14·88	0·20	54·8	3·2	34·10	0·17	17·9	0·8	49·40	0·13	64·6	3·6
Nov. 7	15·08		51·6		34·27		18·7		49·53		61·0	
		0·25		3·2		0·21		1·1		0·20		3·7
17	15·33	0·30	48·4	3·1	34·48	0·25	19·8	1·4	49·73	0·26	57·3	3·5
27	15·63	0·34	45·3	2·9	34·73	0·29	21·2	1·6	49·99	0·32	53·8	3·4
Dec. 7	15·97	0·37	42·4	2·6	35·02	0·32	22·8	1·8	50·31	0·37	50·4	3·0
17	16·34		39·8		35·34		24·6		50·68		47·4	
		0·39		2·3		0·34		2·0		0·41		2·7
27	16·73	0·40	37·5	1·9	35·68	0·34	26·6	2·1	51·09	0·44	44·7	2·3
37	17·13		35·6		36·02		28·7		51·53		42·4	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS,
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	η Bootis.				β Centauri.				α Bootis. (*Arcturus*)			
	R. A.		Dec. *North.*		R. A.		Dec. *South.*		R. A.		Dec. *North.*	
	h m		° ′		h m		° ′		h m		° ′	
	13 47		19 7		13 53		59 39		14 9		19 55	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	45·81	0·34	28·4	2·3	35·52	0·57	56·7	0·9	1·78	0·34	74·5	2·4
11	46·15	0·34	26·1	1·9	36·09	0·57	57·6	1·4	2·12	0·34	72·1	2·0
21	46·49	0·33	24·2	1·5	36·66	0·55	59·0	1·8	2·46	0·33	70·1	1·7
31	46·82		22·7		37·21		60·8		2·79		68·4	
		0·32		1·2		0·53		2·2		0·32		1·3
Feb. 10	47·14	0·29	21·5	0·7	37·74	0·48	63·0	2·5	3·11	0·30	67·1	0·8
20	47·43	0·25	20·8	0·2	38·22	0·43	65·5	2·7	3·41	0·26	66·3	0·3
Mar. 2	47·68	0·22	20·6	0·1	38·65	0·38	68·2	2·9	3·67	0·24	66·0	0·0
12	47·90		20·7		39·03		71·1		3·91		66·0	
		0·19		0·5		0·32		3·1		0·20		0·5
22	48·09	0·15	21·2	0·8	39·35	0·26	74·2	3·1	4·11	0·17	66·5	0·8
Apr. 1	48·24	0·11	22·0	1·1	39·61	0·20	77·3	3·1	4·28	0·13	67·3	1·1
11	48·35	0·08	23·1	1·3	39·81	0·15	80·4	3·0	4·41	0·10	68·4	1·3
21	48·43		24·4		39·96		83·4		4·51		69·7	
		0·05		1·5		0·08		2·9		0·07		1·4
May 1	48·48	0·01	25·9	1·4	40·04	0·02	86·3	2·7	4·58	0·03	71·1	1·6
11	48·49	0·01	27·3	1·5	40·06	0·03	89·0	2·5	4·61	0·01	72·7	1·5
21	48·48	0·03	28·8	1·4	40·03	0·08	91·5	2·2	4·62	0·02	74·2	1·5
31	48·45		30·2		39·95		93·7		4·60		75·7	
		0·05		1·3		0·14		1·9		0·05		1·3
June 10	48·40	0·08	31·5	1·1	39·81	0·18	95·6	1·6	4·55	0·07	77·0	1·3
20	48·32	0·09	32·6	1·0	39·63	0·22	97·2	1·1	4·48	0·08	78·3	1·0
30	48·23	0·11	33·6	0·7	39·41	0·26	98·3	0·7	4·40	0·11	79·3	0·8
July 10	48·12		34·3		39·15		99·0		4·29		80·1	
		0·11		0·5		0·29		0·3		0·12		0·6
20	48·01	0·13	34·8	0·2	38·86	0·30	99·3	0·2	4·17	0·13	80·7	0·3
30	47·88	0·12	35·0	0·0	38·56	0·31	99·1	0·6	4·04	0·14	81·0	0·0
Aug. 9	47·76	0·13	35·0	0·3	38·25	0·30	98·5	1·0	3·90	0·14	81·0	0·3
19	47·63		34·7		37·95		97·5		3·76		80·7	
		0·11		0·5		0·28		1·4		0·13		0·5
29	47·52	0·10	34·2	0·9	37·67	0·25	96·1	1·8	3·63	0·11	80·2	0·9
Sept. 8	47·42	0·08	33·3	1·2	37·42	0·19	94·3	2·0	3·52	0·10	79·3	1·1
18	47·34	0·05	32·1	1·4	37·23	0·14	92·3	2·3	3·42	0·08	78·2	1·5
28	47·29		30·7		37·09		90·0		3·34		76·7	
		0·01		1·7		0·06		2·3		0·04		1·7
Oct. 8	47·28	0·02	29·0	1·9	37·03	0·02	87·7	2·4	3·30	0·00	75·0	2·0
18	47·30	0·08	27·1	2·5	37·05	0·13	85·3	2·4	3·30		73·0	2·3
28	47·38	0·13	24·6	2·4	37·18	0·21	82·9	2·1	[illegible]		[illegible]	2·5
Nov. 7	47·51		22·2		37·39		80·8		2		8·0	
		0·17		2·6		0·29		1·7				2·7
17	47·68	0·22	19·6	2·7	37·68	0·37	79·1	1·3			3	2·7
27	47·90	0·27	16·9	2·7	38·05	0·45	77·8	0·9			6	2·8
Dec. 7	48·17	0·29	14·2	2·7	38·50	0·51	76·9	0·4				2·8
17	48·46		11·5		39·01		76·5					
		0·32		2·6		0·54		0·1				2·7
27	48·78	0·34	8·9	2·3	39·55	0·57	76·6	0·6				·4
37	49·12		6·6		40·12		77·2					

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α^s Centauri.				ε Bootis.				α^s Libræ.			
	R. A.		Dec. *South.*		R. A.		Dec. *North.*		R. A.		Dec. *South.*	
	h m		° ′		h m		° ′		h m		° ′	
	14 29		60 13		14 38		27 40		14 42		15 26	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	45·02	0·56	37·8	0·4	37·98	0·33	66·1	2·4	50·21	0·33	7·9	1·6
11	45·58	0·58	38·2	0·9	38·31	0·35	63·7	2·1	50·54	0·34	9·5	1·7
21	46·16	0·56	39·1	1·3	38·66	0·34	61·6	1·7	50·88	0·34	11·2	1·8
31	46·72		40·4		39·00		59·9		51·22		13·0	
		0·55		1·7		0·34		1·2		0·33		1·6
Feb. 10	47·27	0·52	42·1	2·0	39·34	0·33	58·7	0·7	51·55	0·31	14·6	1·6
20	47·79	0·48	44·1	2·3	39·67	0·30	58·0	0·2	51·86	0·29	16·2	1·5
Mar. 2	48·27	0·43	46·4	2·6	39·97	0·26	57·8	0·3	52·15	0·27	17·7	1·3
12	48·70		49·0		40·23		58·1		52·42		19·0	
		0·38		2·7		0·24		0·8		0·23		1·1
22	49·08	0·33	51·7	2·9	40·47	0·20	58·9	1·1	52·65	0·21	20·1	1·0
Apr. 1	49·41	0·27	54·6	2·8	40·67	0·17	60·0	1·5	52·86	0·18	21·1	0·7
11	49·68	0·21	57·4	2·9	40·84	0·13	61·5	1·8	53·04	0·14	21·8	0·6
21	49·89		60·3		40·97		63·3		53·18		22·4	
		0·14		2·9		0·09		1·9		0·12		0·4
May 1	50·03	0·09	63·2	2·7	41·06	0·06	65·2	2·0	53·30	0·09	22·8	0·4
11	50·12	0·03	65·9	2·6	41·12	0·03	67·2	2·1	53·39	0·07	23·2	0·1
21	50·15	0·03	68·5	2·3	41·15	0·01	69·3	1·9	53·46	0·03	23·3	0·1
31	50·12		70·8		41·14		71·2		53·49		23·4	
		0·09		2·1		0·03		1·8		0·01		0·0
June 10	50·03	0·15	72·9	1·8	41·11	0·07	73·0	1·7	53·50	0·02	23·4	0·1
20	49·88	0·20	74·7	1·5	41·04	0·09	74·7	1·4	53·48	0·05	23·3	0·2
30	49·68	0·24	76·2	1·1	40·95	0·11	76·1	1·1	53·43	0·08	23·1	0·2
July 10	49·44		77·3		40·84		77·2		53·35		22·9	
		0·28		0·6		0·13		0·8		0·09		0·3
20	49·16	0·30	77·9	0·2	40·71	0·14	78·0	0·5	53·26	0·11	22·6	0·4
30	48·86	0·33	78·1	0·2	40·57	0·16	78·5	0·2	53·15	0·13	22·2	0·4
Aug. 9	48·53	0·34	77·9	0·7	40·41	0·16	78·7	0·2	53·02	0·13	21·8	0·4
19	48·19		77·2		40·25		78·5		52·89		21·4	
		0·32		1·0		0·17		0·6		0·13		0·5
29	47·87	0·30	76·2	1·5	40·08	0·15	77·9	0·9	52·76	0·13	20·9	0·4
Sept. 8	47·57	0·26	74·7	1·8	39·93	0·13	77·0	1·2	52·63	0·11	20·5	0·5
18	47·31	0·21	72·9	2·0	39·80	0·11	75·8	1·6	52·52	0·09	20·0	0·3
28	47·10		70·9		39·69		74·2		52·43		19·7	
		0·14		2·2		0·08		2·0		0·06		0·2
Oct. 8	46·96	0·06	68·7	2·4	39·61	0·04	72·2	2·2	52·37	0·01	19·5	0·1
18	46·90	0·04	66·3	2·3	39·57	0·01	70·0	2·5	52·36	0·03	19·4	0·0
28	46·94	0·14	64·0	2·4	39·58	0·07	67·5	3·0	52·39	0·09	19·4	0·4
Nov. 7	47·08		61·6		39·65		64·5		52·48		19·8	
		0·22		1·9		0·12		3·0		0·14		0·5
17	47·30	0·31	59·7	1·7	39·77	0·16	61·5	3·0	52·62	0·18	20·3	0·8
27	47·61	0·40	58·0	1·3	39·93	0·22	58·5	3·1	52·80	0·24	21·1	1·1
Dec. 7	48·01	0·46	56·7	0·8	40·15	0·26	55·4	3·0	53·04	0·27	22·2	1·2
17	48·47		55·9		40·41		52·4		53·31		23·4	
		0·51		0·4		0·30		2·9		0·30		1·4
27	48·98	0·55	55·5	0·1	40·71	0·33	49·5	2·6	53·61	0·33	24·8	1·6
37	49·53		55·6		41·04		46·9		53·94		26·4	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	β Ursæ Minoris.				β Libræ.				α Coronæ Borealis.			
	R. A.		Dec. *North.*		R. A.		Dec. *South.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	14 51		74 44		15 9		8 50		15 28		27 11	
Jan. 1		9·02		35·4		10·84		41·2		31·42		69·3
		0·78		2·4		0·32		1·7		0·30		2·7
11		9·80		33·0		11·16		42·9		31·72		66·6
		0·86		1·8		0·32		1·7		0·32		2·4
21		10·66		31·2		11·48		44·6		32·04		64·2
		0·90		1·2		0·33		1·7		0·34		1·9
31		11·56		30·0		11·81		46·3		32·38		62·3
		0·91		0·4		0·33		1·6		0·33		1·5
Feb. 10		12·47		29·6		12·14		47·9		32·71		60·8
		0·88		0·2		0·31		1·4		0·33		1·0
20		13·35		29·8		12·45		49·3		33·04		59·8
		0·83		0·9		0·30		1·2		0·32		0·5
Mar. 2		14·18		30·7		12·75		50·5		33·36		59·3
		0·75		1·4		0·27		1·0		0·30		0·0
12		14·93		32·1		13·02		51·5		33·66		59·3
		0·65		2·0		0·25		0·8		0·27		0·6
22		15·58		34·1		13·27		52·3		33·93		59·9
		0·52		2·4		0·22		0·5		0·24		1·0
Apr. 1		16·10		36·5		13·49		52·8		34·17		60·9
		0·39		2·8		0·20		0·3		0·21		1·3
11		16·49		39·3		13·69		53·1		34·38		62·2
		0·25		3·0		0·17		0·1		0·18		1·7
21		16·74		42·3		13·86		53·2		34·56		63·9
		0·11		3·1		0·14		0·0		0·15		2·0
May 1		16·85		45·4		14·00		53·2		34·71		65·9
		0·04		3·1		0·11		0·1		0·11		2·1
11		16·81		48·5		14·11		53·1		34·82		68·0
		0·18		2·9		0·09		0·3		0·08		2·1
21		16·63		51·4		14·20		52·8		34·90		70·1
		0·30		2·7		0·05		0·3		0·04		2·1
31		16·33		54·1		14·25		52·5		34·94		72·2
		0·42		2·5		0·02		0·4		0·01		2·1
June 10		15·91		56·6		14·27		52·1		34·95		74·3
		0·52		2·1		0·00		0·4		0·03		2·0
20		15·39		58·7		14·27		51·7		34·92		76·3
		0·61		1·6		0·03		0·4		0·06		1·7
30		14·78		60·3		14·24		51·3		34·86		78·0
		0·68		1·1		0·06		0·4		0·08		1·5
July 10		14·10		61·4		14·18		50·9		34·78		79·5
		0·74		0·7		0·08		0·5		0·12		1·2
20		13·36		62·1		14·10		50·4		34·66		80·7
		0·77		0·1		0·10		0·4		0·14		0·9
30		12·59		62·2		14·00		50·0		34·52		81·6
		0·79		0·4		0·12		0·4		0·16		0·5
Aug. 9		11·80		61·8		13·88		49·6		34·36		82·1
		0·78		1·0		0·14		0·3		0·17		0·2
19		11·02		60·8		13·74		49·3		34·19		82·3
		0·77		1·5		0·14		0·3		0·18		0·2
29		10·25		59·3		13·60		49·0		34·01		82·1
		0·73		1·9		0·13		0·2		0·18		0·5
Sept. 8		9·52		57·4		13·47		48·8		33·83		81·6
		0·67		2·4		0·12		0·2		0·16		0·9
18		8·85		55·0		13·35		48·6		33·67		80·7
		0·60		2·8		0·11		0·0		0·15		1·3
28		8·25		52·2		13·24		48·6		33·52		79·4
		0·50		3·2		0·07		0·1		0 13		1·6
Oct. 8		7·75		49·0		13·17		48·7		33·39		77·8
		0·39		3·5		0·04		0·2		0·09		2·0
18		7·36		45·5		13·13		48·9		33·30		75·8
		0·25		3·7		0·00		0·5		0·04		2·3
28		7·11		41·8		13·13		49·4		0·00		73·5
		0·12		3·8		0·05		0·6				2·6
Nov. 7	{ 6·99 6·98 }		{ 38·0 37·6 }		13·18		50·0					70·9
		0·05		4·0		0·11		1·0		06		3·1
17		7·03		33·6		13·29		51·0				67·8
		0·20		3·9		0·16						
27		7·23		29·7		13·45		52··				2·9
		0·35		3·7		0·20						
Dec. 7		7·58		26·0		13·65						
		0·50		3·4		0···						
17		8·08		22·6		13·90						
		0·62		3·1		0··						
27		8·70		19·5		14·18						
		0·74		2·7								
37		9·44		16·8		14·48						

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Serpentis.				ζ Ursæ Minoris.				β' Scorpii.			
	R. A.		Dec. *North.*		R. A.		Dec. *North.*		R. A.		Dec. S	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	°	″
	15 37		6 52		15 49		78 13		15 56		19	
Jan. 1		6·02		60·6		16·83		62·2		58·66		16·0
11		6·31		58·5		17·62		59·3		58·97		17·1
21		6·62		56·4		18·54		56·9		59·29		18·3
31		6·93		54·6		19·57		55·0		59·62		19·5
Feb. 10		7·25		53·1		20·67		53·9		59·96		20·7
20		7·56		51·9		21·79		53·3		60·30		21·9
Mar. 2		7·86		51·0		22·90		53·5		60·62		23·0
12		8·15		50·5		23·95		54·3		60·93		24·1
22		8·41		50·3		24·92		55·7		61·22		25·0
Apr. 1		8·64		50·5		25·76		57·7		61·50		25·7
11		8·86		51·0		26·46		60·1		61·75		26·4
21		9·04		51·8		26·99		62·8		61·97		26·9
May 1		9·20		52·7		27·34		65·8		62·16		27·3
11		9·33		53·8		27·51		68·9		62·33		27·7
21		9·43		55·1		27·49		72·0		62·48		27·9
31		9·50		56·3		27·29		75·1		62·58		28·1
June 10		9·54		57·5		26·91		77·9		62·66		28·2
20		9·55		58·7		26·37		80·5		62·70		28·3
30		9·53		59·9		25·69		82·7		62·70		28·3
July 10		9·48		60·9		24·88		84·6		62·68		28·3
20		9·40		61·8		23·97		86·0		62·62		28·3
30		9·30		62·4		22·97		86·9		62·52		28·2
Aug. 9		9·17		63·0		21·90		87·3		62·40		28·0
19		9·04		63·3		20·80		87·1		62·27		27·8
29		8·89		63·4		19·68		86·5		62·12		27·5
Sept. 8		8·74		63·4		18·58		85·3		61·96		27·2
18		8·60		63·1		17·52		83·7		61·81		26·9
28		8·47		62·5		16·52		81·6		61·67		26·6
Oct. 8		8·37		61·8		15·61		79·1		61·56		26·3
18		8·30		60·8		14·83		76·1		61·48		26·0
28		8·27		59·5		14·19		72·8		61·44		25·8
Nov. 7		8·28		58·0		13·71		69·3		61·45		25·8
17		8·35		56·3		13·42		65·6		61·51		25·9
27		8·47		54·1		13·32		61·4		61·63		26·3
Dec. 7		8·64		52·0		13·45		57·6		61·80		26·8
17		8·85		49·8		13·78		53·9		62·02		27·4
27		9·10		47·6		14·30		50·4		62·28		28·3
37		9·38		45·4		15·00		47·3		62·57		29·3

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	δ Ophiuchi.				α Scorpii. (*Antares*)				η Draconis.			
	R. A.		Dec. *South.*		R. A.		Dec. *South.*		R. A.		Dec. *North.*	
	h m		° ′		h m		° ′		h m		° ′	
	16 6		3 19		16 20		26 6		16 22		61 50	
	s	s	″	″	s	s	″	″	s	s	″	″
n. 1	43·12	0·28	6·4	1·8	29·16	0·31	20·4	0·6	0·25	0·36	22·2	3·2
11	43·40	0·29	8·2	1·7	29·47	0·32	21·0	0·7	0·61	0·42	19·0	2·9
21	43·69	0·31	9·9	1·6	29·79	0·34	21·7	0·9	1·03	0·47	16·1	2·4
31	44·00		11·5		30·13		22·6		1·50		13·7	
		0·32		1·4		0·35		0·9		0·51		1·8
b. 10	44·32	0·32	12·9	1·2	30·48	0·35	23·5	1·0	2·01	0·52	11·9	1·1
20	44·64	0·30	14·1	1·0	30·83	0·35	24·5	1·0	2·53	0·53	10·8	0·4
ar. 2	44·94	0·30	15·1	0·7	31·18	0·33	25·5	0·9	3·06	0·51	10·4	0·2
12	45·24		15·8		31·51		26·4		3·57		10·6	
		0·28		0·4		0·32		0·9		0·49		0·9
22	45·52	0·26	16·2	0·2	31·83	0·30	27·3	0·8	4·06	0·44	11·5	1·5
pr. 1	45·78	0·23	16·4	0·1	32·13	0·28	28·1	0·8	4·50	0·39	13·0	2·0
11	46·01	0·22	16·3	0·3	32·41	0·25	28·9	0·7	4·89	0·33	15·0	2·4
21	46·23		16·0		32·66		29·6		5·22		17·4	
		0·19		0·5		0·23		0·7		0·27		2·8
ay 1	46·42	0·16	15·5	0·6	32·89	0·21	30·3	0·6	5·49	0·19	20·2	3·0
11	46·58	0·14	14·9	0·7	33·10	0·17	30·9	0·5	5·68	0·12	23·2	3·2
21	46·72	0·10	14·2	0·8	33·27	0·14	31·4	0·6	5·80	0·04	26·4	3·1
31	46·82		13·4		33·41		32·0		5·84		29·5	
		0·07		0·8		0·10		0·4		0·03		3·1
ne 10	46·89	0·04	12·6	0·8	33·51	0·06	32·4	0·5	5·81	0·11	32·6	2·9
20	46·93	0·01	11·8	0·7	33·57	0·03	32·9	0·3	5·70	0·17	35·5	2·7
30	46·94	0·02	11·1	0·8	33·60	0·01	33·2	0·4	5·53	0·24	38·2	2·3
ly 10	46·92		10·3		33·59		33·6		5·29		40·5	
		0·06		0·6		0·05		0·2		0·30		2·0
20	46·86		9·7		33·54		33·8		4·99		42·5	
30	46·77	0·09	9·2	0·5	33·46	0·08	34·0	0·2	4·64	0·35	44·0	1·5
g. 9	46·66	0·11	8·7	0·5	33·34	0·12	34·1	0·1	4·25	0·39	45·0	1·0
19	46·53	0·13	8·4	0·3	33·20	0·14	34·0	0·1	3·83	0·42	45·6	0·6
		0·14		0·3		0·16		0·1		0·44		0·1
29	46·39		8·1		33·04		33·9		3·39		45·7	
pt. 8	46·24	0·15	8·0	0·1	32·87	0·17	33·6	0·3	2·94	0·45	45·2	0·5
18	46·09	0·15	8·0	0·0	32·70	0·17	33·3	0·3	2·49	0·45	44·2	1·0
28	45·95	0·14	8·2	0·2	32·54	0·16	32·9	0·4	2·07	0·42	42·7	1·5
		0·12		0·3		0·13		0·5		0·40		2·0
t. 8	45·83		8·5		32·41		32·4		1·67		40·7	
18	45·75	0·08	9·0	0·5	32·31	0·10	31·9	0·5	1·32	0·35	38·3	2·4
28	45·70	0·05	9·6	0·6	32·24	0·07	31·4	0·5	1·04	0·28	35	
ov. 7	45·69	0·01	10·5	0·9	32·23	0·01	31·0	0·4	0·83	0·21		
		0·04		1·1		0·04		0·3		0·14		
17	45·73	0·10	11·6	1·4	32·27	0·09	30·7	0·2	0·69	0·0		
27	[16]45·83	0·15	13·0	1·4	32·36	0·17	30·5	0·0	[19]0·65	0·		
ec. 7	45·98	0·19	14·4	1·6	[19]32·53	0·20	30·5	0·2	0·70	0·		
17	46·17		16·0		32·73		30·7		0·85			
		0·23		1·7		0·25		0·3		0·		
27	46 40	0·26	17·7	1·7	32·98	0·29	31·0	0·5	1·09			
37	46·66		19·4		33·27		31·5		1·41			

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Trianguli Australis.				ε Ursæ Minoris.			
	R. A.		Dec. *South.*		R. A.		Dec. *North.*	
	h 16		° 68		h 17		° 82	
	m s	s	′ ″	″	m s	s	′ ″	′
Jan. 1	33 16·38	0·62	45 6·6	1·4	0 51·56	0·68	15 53·9	3·4
11	17·00	0·68	5·2	1·1	52·24	0·96	50·5	3·0
21	17·68	0·73	4·1	0·7	53·20	1·19	47·5	2·5
31	18·41	0·77	3·4	0·2	54·39	1·39	45·0	2·0
Feb. 10	19·18	0·78	3·2	0·1	55·78	1·53	43·0	1·4
20	19·96	0·78	3·3	0·6	57·31	1·61	41·6	0·8
Mar. 2	20·74	0·77	3·9	1·0	0 58·92	1·62	40·8	0·1
12	21·51	0·75	4·9	1·3	1 0·54	1·58	40·7	0·6
22	22·26	0·70	6·2	1·6	2·12	1·48	41·3	1·1
Apr. 1	22·96	0·65	7·8	1·9	3·60	1·33	42·4	1·7
11	23·61	0·59	9·7	2·2	4·93	1·14	44·1	2·2
21	24·20	0·53	11·9	2·4	6·07	0·90	46·3	2·6
May 1	24·73	0·45	14·3	2·5	6·97	0·64	48·9	2·9
11	25·18	0·37	16·8	2·7	7·61	0·37	51·8	3·1
21	25·55	0·28	19·5	2·6	7·98	0·09	54·9	3·1
31	25·83	0·18	22·1	2·7	8·07	0·20	15 58·0	3·1
June 10	26·01	0·09	24·8	2·6	7·87	0·47	16 1·1	3·1
20	26·10	0·02	27·4	2·5	7·40	0·74	4·2	2·8
30	26·08	0·11	29·9	2·3	6·66	0·98	7·0	2·5
July 10	25·97	0·21	32·2	2·0	5·68	1·20	9·5	2·2
20	25·76	0·29	34·2	1·7	4·48	1·39	11·7	1·9
30	25·47	0·36	35·9	1·3	3·09	1·55	13·6	1·4
Aug. 9	25·11	0·43	37·2	0·9	1 1·54	1·67	15·0	0·9
19	24·68	0·47	38·1	0·4	0 59·87	1·77	15·9	0·5
29	24·21	0·49	38·5	0·0	58·10	1·82	16·4	0·1
Sept. 8	23·72	0·49	38·5	0·5	56·28	1·83	16·3	0·5
18	23·23	0·47	38·0	1·0	54·45	1·79	15·8	1·1
28	22·76	0·41	37·0	1·4	52·66	1·73	14·7	1·5
Oct. 8	22·35	0·34	35·6	1·8	50·93	1·61	13·2	2·0
18	22·01	0·25	33·8	2·1	49·32	1·44	11·2	2·4
28	21·76	0·15	31·7	2·4	47·88	1·24	8·8	2·8
Nov. 7	21·61	0·02	29·3	2·5	46·64	1·02	6·0	3·2
17	21·59	0·11	26·8	2·4	45·62	0·74	16 2·8	3·4
27	21·70	0·26	24·4	2·7	44·88	0·45	15 59·4	3·6
Dec. 7	21·96	0·36	21·7	2·3	44·43	0·13	55·8	4·0
17	22·32	0·48	19·4	2·0	44·30	0·21	51·8	3·6
27	22·80	0·57	17·4	1·6	44·51	0·52	48·2	3·4
37	33 23·37		45 15·8		0 45·03		15 44·8	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS,
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Herculis.				β Draconis.				α Ophiuchi.			
	R. A.		Dec. *North.*		R. A.		Dec. *North.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	17 8		14 33		17 27		52 24		17 28		12 39	
Jan. 1	0·23	0·22	24·7	2·4	7·08	0·21	26·4	3·5	10·24	0·21	60·9	2·3
11	0·45	0·25	22·3	2·3	7·29	0·27	22·9	3·2	10·45	0·23	58·6	2·1
21	0·70	0·27	20·0	2·0	7·56	0·32	19·7	2·9	10·68	0·26	56·5	2·0
31	0·97	0·29	18·0	1·7	7·88	0·37	16·8	2·4	10·94	0·28	54·5	1·7
Feb. 10	1·26	0·30	16·3	1·3	8·25	0·39	14·4	1·8	11·22	0·30	52·8	1·4
20	1·56	0·31	15·0	1·0	8·64	0·40	12·6	1·2	11·52	0·29	51·4	0·9
Mar. 2	1·87	0·30	14·0	0·5	9·04	0·42	11·4	0·6	11·81	0·31	50·5	0·6
12	2·17	0·30	13·5	0·1	9·46	0·41	10·8	0·1	12·12	0·30	49·9	0·1
22	2·47	0·28	13·4	0·3	9·87	0·40	10·9	0·7	12·42	0·29	49·8	0·2
Apr. 1	2·75	0·27	13·7	0·8	10·27	0·38	11·6	1·3	12·71	0·28	50·0	0·7
11	3·02	0·26	14·5	1·1	10·65	0·35	12·9	1·9	12·99	0·26	50·7	1·0
21	3·28	0·23	15·6	1·4	11·00	0·30	14·8	2·3	13·25	0·25	51·7	1·3
May 1	3·51	0·21	17·0	1·6	11·30	0·26	17·1	2·7	13·50	0·22	53·0	1·6
11	3·72	0·18	18·6	1·8	11·56	0·21	19·8	2·9	13·72	0·20	54·6	1·7
21	3·90	0·14	20·4	1·9	11·77	0·16	22·7	3·2	13·92	0·16	56·3	1·9
31	4·04	0·12	22·3	1·9	11·93	0·10	25·9	3·1	14·08	0·14	58·2	1·9
June 10	4·16	0·08	24·2	1·9	12·03	0·04	29·0	3·2	14·22	0·10	60·1	1·8
20	4·24	0·04	6·1	1·8	12·07	0·02	32·2	3·1	14·32	0·06	61·9	1·8
30	4·28	0·00	27·9	1·7	12·05	0·08	35·3	2·8	14·38	0·02	63·7	1·7
July 10	4·28	0·04	29·6	1·5	11·97	0·13	38·1	2·6	14·40	0·01	65·4	1·5
20	4·24	0·07	31·1	1·3	11·84	0·19	40·7	2·2	14·39	0·06	66·9	1·3
30	4·17	0·10	32·4	1·0	11·65	0·24	42·9	1·9	14·33	0·09	68·2	1·1
Aug. 9	4·07	0·13	33·4	0·9	11·41	0·28	44·8	1·4	14·24	0·12	69·3	0·9
19	3·94	0·15	34·3	0·5	11·13	0·31	46·2	1·0	14·12	0·15	70·2	0·6
29	3·79	0·17	34·8	0·2	10·82	0·33	47·2	0·5	13·97	0·16	70·8	0·4
Sept. 8	3·62	0·18	35·0	0·0	10·49	0·35	47·7	0·0	13·81	0·17	71·2	0·0
18	3·44	0·18	35·0	0·3	10·14	0·35	47·7	0·5	13·64	0·18	71·2	0·2
28	3·26	0·16	34·7	0·7	9·79	0·33	47·2	1·0	13·46	0·17	71·0	0·5
Oct. 8	3·10	0·14	34·0	0·9	9·46	0·31	46·2	1·5	13·29	0·15	70·5	0·8
18	2·96	0·12	33·1	1·3	9·15	0·28	44·7	2·0	13·14	0·12	69·7	1·1
28	2·84	0·07	31·8	1·5	8·87	0·23	42·7	2·4	13·02	0·09	68·6	1·3
Nov. 7	2·77	0·03	30·3	1·8	8·64	0·17	40·3	2·9	12·93		67·3	1·7
17	2·74	0·01	28·5	2·0	8·47	0·10	37·4	3·1			65·6	1·8
27	2·75	0·07	26·5	2·2	8·37	0·04	34·3	3·4			63·8	2·1
Dec. 7	2·82	0·13	24·3	2·6	8·33	0·04	30·9				61·7	2·4
17	2·95	0·16	21·7	2·5	8·37	0·11	26·9				59·3	2·3
27	3·11	0·20	19·2	2·4	8·48	0·18	23·2				0	2·3
37	3·31		16·8		8·66		19·					

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	σ Octantis.						γ Draconis.					
	R. A.			Dec. *South.*			R. A.			Dec. *North.*		
	h			°			h			°		
	17			89			17			51		
	m	s	s	′	″	″	m	s	s	′	″	″
Jan. 1	36	50·71	10·86	16	32·7	2·8	53	11·94	0·17	30	17·5	3·5
11	37	1·57	13·62		29·9	2·5		12·11	0·23		14·0	3·3
21	37	15·19	15·97		27·4	2·1		12·34	0·29		10·7	3·0
31	37	31·16			25·3			12·63			7·7	
			17·88			1·7			0·33			2·5
Feb. 10	37	49·04	19·36		23·6	1·2		12·96	0·36		5·2	2·1
20	38	8·40	20·29		22·4	0·7		13·32	0·39		3·1	1·5
Mar. 2	38	28·69	20·77		21·7	0·3		13·71	0·41		1·6	0·8
12	38	49·46			21·4			14·12			0·8	
			20·83			0·3			0·40			0·2
22	39	10·29	20·40		21·7	0·8		14·52	0·40		0·6	0·5
Apr. 1	39	30·69	19·56		22·5	1·2		14·92	0·39		1·1	1·1
11	39	50·25	18·32		23·7	1·6		15·31	0·36		2·2	1·6
21	40	8·57			25·3			15·67			3·8	
			16·72			2·0			0·33			2·1
May 1	40	25·29	14·78		27·3	2·4		16·00	0·29		5·9	2·5
11	40	40·07	12·54		29·7	2·7		16·29	0·25		8·4	2·9
21	40	52·61	10·06		32·4	2·9		16·54	0·19		11·3	3·1
31	41	2·67			35·3			16·73			14·4	
			7·32			3·1			0·14			3·2
June 10	41	9·99	4·45		38·4	3·1		16·87	0·08		17·6	3·2
20	41	14·44	1·48		41·5	3·2		16·95	0·01		20·8	3·2
30	41	15·92	1·48		44·7	3·2		16·96	0·04		24·0	3·0
July 10	41	14·44			47·9			16·92			27·0	
			4·39			2·9			0·09			2·8
20	41	10·05	7·22		50·8	2·7		16·83	0·16		29·8	2·5
30	41	2·83	9·76		53·5	2·4		16·67	0·21		32·3	2·1
Aug. 9	40	53·07	11·97		55·9	2·0		16·46	0·25		34·4	1·7
19	40	41·10			57·9			16·21			36·1	
			13·75			1·5			0·29			1·3
29	40	27·35	15·07	16	59·4	0·9		15·92	0·32		37·4	0·9
Sept. 8	40	12·28	15·83	17	0·3	0·4		15·60	0·33		38·3	0·4
18	39	56·45	15·97		0·7	0·2		15·27	0·35		38·7	0·2
28	39	40·48		17	0·5			14·92			38·5	
			15·47			0·8			0·33			0·6
Oct. 8	39	25·01	14·34	16	59·7	1·4		14·59	0·32		37·9	1·2
18	39	10·67	12·59		58·3	1·9		14·27	0·29		36·7	1·7
28	38	58·08	10·30		56·4	2·5		13·98	0·25		35·0	2·1
Nov. 7	38	47·78			53·9			13·73			32·9	
			7·60			2·7			0·19			2·6
17	38	40·18	4·45		51·2	3·0		13·54	0·14		30·3	2·9
27	38	35·73	1·10		48·2	3·2		13·40	0·08		27·4	3·2
Dec. 7	38	34·63	2·29		45·0	3·3		13·32	0·00		24·2	3·5
17	{38 38	36·02 37·34}		{41·7 41·4}				13·32			20·7	
			6·05			3·2	∞		0·08			3·9
27	38	43·39	9·30		38·2	3·0		13·40	0·14		16·8	3·5
37	38	52·69		16	35·2		53	13·54		30	13·3	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	μ^1 Sagittarii.		α Lyræ. (*Vega*)		β Lyræ.	
	R. A.	Dec. *South.*	R. A.	Dec. *North.*	R. A.	Dec. *North.*
	h m	° ′	h m	° ′	h m	° ′
	18 5	21 5	18 31	38 38	18 44	33 11
	s s	″ ″	s s	″ ″	s s	″ ″
Jan. 1	3·16	37·9	59·43	56·7	41·33	41·2
		0·3		3·2		3·0
11	3·36	38·2	59·56	53·5	41·44	38·2
		0·3	0·13	3·1	0·11	2·9
21	3·60	38·5	59·73	50·4	41·60	35·3
		0·4	0·17	2·8	0·16	2·7
31	3·86	38·9	59·94	47·6	41·80	32·6
	0·29	0·3	0·21	2·6	0·20	2·4
Feb. 10	4·15	39·2	60·19	45·0	42·03	30·2
	0·30	0·2	0·29	2·1	0·26	2·1
20	4·45	39·4	60·48	42·9	42·29	28·1
	0·32	0·3	0·31	1·6	0·29	1·6
Mar. 2	4·77	39·7	60·79	41·3	42·58	26·5
	0·32	0·1	0·32	1·1	0·30	1·1
12	5·09	39·8	61·11	40·2	42·88	25·4
	0·33	0·0	0·34	0·5	0·32	0·5
22	5·42	39·8	61·45	39·7	43·20	24·9
	0·33	0·0	0·34	0·2	0·33	0·1
Apr. 1	5·75	39·8	61·79	39·9	43·53	25·0
	0·32	0·1	0·34	0·7	0·32	0·6
11	6·07	39·7	62·13	40·6	43·85	25·6
	0·31	0·2	0·33	1·2	0·32	1·1
21	6·38	39·5	62·46	41·8	44·17	26·7
	0·30	0·3	0·31	1·8	0·31	1·6
May 1	6·68	39·2	62·77	43·6	44·48	28·3
	0·28	0·2	0·29	2·2	0·29	2·1
11	6·96	39·0	63·06	45·8	44·77	30·4
	0·26	0·3	0·27	2·5	0·26	2·3
21	7·22	38·7	63·33	48·3	45·03	32·7
	0·23	0·2	0·22	2·8	0·23	2·6
31	7·45	38·5	63·55	51·1	45·26	35·3
	0·20	0·2	0·19	2·9	0·20	2·8
June 10	7·65	38·3	63·74	54·0	45·46	38·1
	0·17	0·2	0·14	3·0	0·16	2·9
20	7·82	38·1	63·88	57·0	45·62	41·0
	0·12	0·0	0·09	3·1	0·11	2·9
30	7·94	38·1	63·97	60·1	45·73	43·9
	0·08	0·1	0·05	2·9	0·07	2·8
July 10	8·02	38·0	64·02	63·0	45·80	46·7
	0·04	0·1	0·01	2·8	0·02	2·7
20	8·06	38·1	64·01	65·8	45·82	49·4
	0·00	0·1	0·05	2·6	0·03	2·5
30	8·06	38·2	63·96	68·4	45·79	51·9
	0·05	0·1	0·11	2·3	0·07	2·2
Aug. 9	8·01	38·3	63·85	70·7	45·72	54·1
	0·09	0·2	0·15	1·9	0·12	1·9
19	7·92	38·5	63·70	72·6	45·60	56·0
	0·11	0·1	0·18	1·6	0·16	1·6
29	7·81	38·6	63·52	74·2	45·44	57·6
	0·15	0·1	0·22	1·2	0·19	1·2
Sept. 8	7·66	38·7	63·30	75·4	45·25	58·8
	0·17	0·1	0·24	0·8	0·21	0·8
18	7·49	38·8	63·06	76·2	45·04	59·6
	0·17	0·1	0·25	0·3	0·22	0·4
28	7·32	38·9	62·81	76·5	44·82	60·0
	0·17	0·0	0·25	0·1	0·23	0·0
Oct. 8	7·15	38·9	62·56	76·4	44·59	60·0
	0·15	0·0	0·24	0·6	0·23	0·5
18	7·00	38·9	62·32	75·8	44·36	59·5
	0·13	0·0	0·23	1·1	0·21	0·9
28	6·87	38·9	62·09	74·7	44·15	58·6
	0·10	0·0	0·20	1·6	0·18	1·3
Nov. 7	6·77	38·9	61·89	73·1	43·97	
	0·06	0·1	0·16	1·9	0·	
17	6·71	38·8	61·73	71·2	43·8	
	0·01	0·1	0·11	2·3		
27	6·70	38·9	61·62	68·9	43	
	0·04	0·0	0·07	2·7		
Dec. 7	6·74	38·9	61·55	66·2	4	
	0·08	0·1	0·02	2·9		
17	6·82	39·0	61·53	63·3	4	
	0·15	0·2	0·04	3·2		
27	6·97	39·2	61·57	60·1		
	0·18	0·2	0·11	3·5		
37	7·15	39·4	61·68	56·6		

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	ζ Aquilæ.				ϑ Aquilæ.				γ Aquilæ.			
	R. A.		Dec. *North.*		R. A.		Dec. *North.*		R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	18 58		13 38		19 18		2 49		19 39		10 15	
Jan. 1		42·54		57·3		9·07		37·2		19·85		39·8
			0·12				0·11				0·07	
11		42·66		54·9		9·18		35·6		19·92		38·0
			0·15				0·14				0·12	
21		42·81		52·9		9·32		34·2		20·04		36·0
			0·19				0·18				0·15	
31		43·00		51·1		9·50		32·8		20·19		34·4
			0·21				0·20				0·18	
				1·8				1·1				1·5
Feb. 10		43·21		49·3		9·70		31·7		20·37		32·9
			0·24				0·23				0·21	
20		43·45		47·8		9·93		30·7		20·58		31·6
			0·26				0·25				0·23	
Mar. 2		43·71		46·7		10·18		30·1		20·81		30·6
			0·27				0·27				0·25	
12		43·98		46·0		10·45		29·7		21·06		30·0
			0·29				0·28				0·27	
				0·3				0·1				0·3
22		44·27		45·7		10·73		29·6		21·33		29·7
			0·30				0·29				0·29	
Apr. 1		44·57		45·9		11·02		29·9		21·62		29·9
			0·30				0·30				0·30	
11		44·87		46·5		11·32		30·5		21·92		30·4
			0·30				0·30				0·30	
21		45·17		47·4		11·62		31·3		22·22		31·3
			0·29				0·30				0·30	
				1·3				1·2				1·2
May 1		45·46		48·7		11·92		32·5		22·52		32·5
			0·28				0·29				0·30	
11		45·74		50·3		12·21		33·9		22·82		34·0
			0·26				0·28				0·28	
21		46·00		52·1		12·49		35·4		23·10		35·8
			0·24				0·26				0·27	
31		46·24		54·2		12·75		37·1		23·37		37·7
			0·22				0·23				0·25	
				2·1				1·7				2·1
June 10		46·46		56·3		12·98		38·8		23·62		39·8
			0·18				0·21				0·22	
20		46·64		58·4		13·19		40·5		23·84		41·9
			0·14				0·17				0·18	
30		46·78		60·6		13·36		42·2		24·02		44·0
			0·11				0·13				0·14	
July 10		46·89		62·7		13·49		43·8		24·16		46·0
			0·06				0·08				0·10	
				1·9				1·5				2·0
20		46·95		64·6		13·57		45·3		24·26		48·0
			0·01				0·05				0·06	
30		46·96		66·4		13·62		46·6		24·32		49·7
			0·03				0·00				0·01	
Aug. 9		46·93		68·0		13·62		47·7		24·33		51·3
			0·06				0·04				0·03	
19		46·87		69·3		13·58		48·7		24·30		52·7
			0·10				0·08				0·07	
				1·1				0·7				1·1
29		46·77		70·4		13·50		49·4		24·23		53·8
			0·14				0·11				0·10	
Sept. 8		46·63		71·2		13·39		50·0		24·13		54·7
			0·16				0·14				0·13	
18		46·47		71·8		13·25		50·3		24·00		55·4
			0·17				0·15				0·16	
28		46·30		72·1		13·10		50·5		23·84		55·8
			0·18				0·16				0·16	
				0·1				0·1				0·1
Oct. 8		46·12		72·0		12·94		50·4		23·68		55·9
			0·17				0·17				0·17	
18		45·95		71·7		12·77		50·2		23·51		55·8
			0·16				0·15				0·16	
28		45·79		71·1		12·62		49·8		23·35		55·4
			0·14				0·13				0·15	
Nov. 7		45·65		70·2		12·49		49·1		23·20		54·7
			0·11				0·11				0·12	
				1·2				0·8				0·9
17		45·54		69·0		12·38		48·3		23·08		53·8
			0·08				0·07				0·09	
27		45·46		67·5		12·31		47·3		22·99		52·7
			0·03				0·03				0·06	
Dec. 7		45·43		65·8		12·28		46·2		22·93		51·3
			0·01				0·00				0·03	
17		45·44		64·0		12·28		44·9		22·90		49·8
			0·04				0·04				0·02	
				2·0				1·3				1·7
27		45·48		62·0		12·32		43·6		22·92		48·1
			0·10				0·08				0·06	
37		45·58		59·9		12·40		42·1		22·98		46·4
				2·1				1·5				1·7

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Aquilæ. (*Altair*) R.A.		Dec. *North.*		β Aquilæ. R.A.		Dec. *North.*	
	h 19		° 8		h 19		° 6	
	m s	s	′ ″	″	m s	s	′ ″	″
an. 1	43 40·38	0·07	29 11·6	1·8	48 9·33	0·07	2 44·2	1·6
11	40·45	0·12	9·8	1·7	9·40	0·12	42·6	1·7
21	14 40·57	0·15	8·1	1·5	15 9·52	0·14	40·9	1·4
31	40·72	0·18	6·6	1·4	9·66	0·17	39·5	1·3
eb. 10	40·90	0·20	5·2	1·2	9·83	0·20	38·2	1·0
20	41·10	0·23	4·0	0·9	10·03	0·23	37·2	0·8
lar. 2	41·33	0·25	3·1	0·5	10·26	0·25	36·4	0·5
12	41·58	0·27	2·6	0·2	10·51	0·26	35·9	0·2
22	41·85	0·29	2·4	0·2	10·77	0·28	35·7	0·2
pr. 1	42·14	0·29	2·6	0·5	11·05	0·30	35·9	0·6
11	42·43	0·30	3·1	0·9	11·35	0·30	36·5	0·9
21	42·73	0·31	4·0	1·3	11·65	0·30	37·4	1·2
lay 1	43·04	0·30	5·3	1·5	11·95	0·31	38·6	1·4
11	43·34	0·29	6·8	1·7	12·26	0·29	40·0	1·7
21	43·63	0·27	8·5	1·9	12·55	0·27	41·7	1·8
31	43·90	0·25	10·4	2·0	12·82	0·25	43·5	1·9
une 10	44·15	0·22	12·4	2·0	13·07	0·23	45·4	1·9
20	44·37	0·19	14·4	2·1	13·30	0·19	47·3	1·9
30	44·56	0·15	16·5	1·9	13·49	0·16	49·2	1·9
uly 10	44·71	0·11	18·4	1·9	13·65	0·11	51·1	1·7
20	44·82	0·06	20·3	1·7	13·76	0·07	52·8	1·6
30	44·88	0·02	22·0	1·5	13·83	0·03	54·4	1·3
ug. 9	44·90	0·03	23·5	1·3	13·86	0·02	55·7	1·2
19	44·87	0·06	24·8	1·1	13·84	0·06	56·9	1·0
29	44·81	0·09	25·9	0·9	13·78	0·10	57·9	0·8
ept. 8	44·72	0·13	26·8	0·6	13·68	0·12	58·7	0·5
18	44·59	0·15	27·4	0·4	13·56	0·14	59·2	0·3
28	44·44	0·16	27·8	0·1	13·42	0·16	59·5	0·1
ct. 8	44·28	0·17	27·9	0·1	13·26	0·16	59·6	0·1
18	44·11	0·15	27·8	0·4	13·10		59·5	0·4
28	43·96	0·15	27·4	0·6	12		59·1	0·6
ov. 7	43·81	0·12	26·8	0·8	1		58·5	0·1
17	43·69	0·09	26·0	1·1			57·7	
27	43·60	0·06	24·9	1·2			56·7	
ec. 7	43·54	0·02	23·7	1·5			55·5	
17	43·52	0·02	22·2	1·5			54·2	
27	43·54	0·05	20·7	1·6				1·7
37	43 43·59		29 19·1					

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

	Pavonis.			α Cygni.			61¹ Cygni.		
	R.A.		Dec. *South.*	R.A.		Dec. *North.*	R.A.		Dec. *North.*
	h m s	s	° ′ ″	h m s	s	° ′ ″	h m s	s	° ′ ″
			11	20 36		44 45	21 0		38 1
			″			″			″
					26·90	49·5		21·67	78·0
					26·85	0·05 46·6	2·9	21·62	0·05 75·6 2·4
					26·86	0·01 43·7	2·9	21·62	0·00 73·0 2·6
					26·92	0·06 40·4	3·3	21·66	0·04 70·4 2·6
			2·4			0·10	3·0		0·10 2·9
			53		27·02		37·4	21·76	67·5
			45·5	2·3	27·18	0·16	34·7 2·7	21·89	0·13 65·1 2·4
	7·42	0·37	43·2	2·2	27·38	0·20	32·3 2·4	22·07	0·18 63·0 2·1
12	7·84	0·42	41·0	2·1	27·63	0·25	30·4 1·9	22·28	0·21 61·2 1·8
		0·46	38·9	1·8		0·29	1·5		0·26 1·3
22	8·30		37·1		27·92		28·9	22·54	59·9
1	8·78	0·48	35·4	1·7	28·24	0·32	27·9 1·0	22·83	0·29 59·1 0·8
11	9·29	0·51	34·0	1·4	28·58	0·34	27·6 0·3	23·15	0·32 58·8 0·3
21	9·82	0·53	32·9	1·1	28·95	0·37	27·8 0·2	23·49	0·34 59·0 0·2
		0·54		0·9		0·37	0·8		0·35 0·8
y 1	10·36		32·0		29·32		28·6	23·84	59·8
11	10·89	0·53	31·6	0·4	29·70	0·38	1·3 29·9	24·21	0·37 61·2 1·4
21	11·42	0·53	31·4	0·2	30·06	0·36	1·9 31·8	24·57	0·36 63·0 1·8
31	11·92	0·50	31·6	0·2	30·41	0·35	2·3 34·1	24·92	0·35 65·2 2·2
		0·47		0·6		0·32	2·7		0·33 2·6
ne 10	12·39		32·2		30·73		36·8	25·25	67·8
20	12·82	0·43	33·0	0·8	31·01	0·28	2·9 39·7	25·55	0·30 70·7 2·9
30	13·19	0·37	34·2	1·2	31·26	0·25	3·2 42·9	25·81	0·26 73·7 3·0
ly 10	13·50	0·31	35·7	1·5	31·45	0·19	3·3 46·2	26·04	0·23 76·9 3·2
		0·24		1·7		0·14	3·3		0·18 3·3
20	13·74		37·4		31·59		49·5	26·22	80·2
30	13·91	0·17	39·3	1·9	31·67	0·08	3·3 52·8	26·35	0·13 83·4 3·2
ug. 9	13·99	0·08	41·3	2·0	31·69	0·02	3·2 56·0	26·42	0·07 86·6 3·2
19	14·00	0·01	43·3	2·0	31·66	0·03	3·1 59·1	26·45	0·03 89·6 3·0
		0·07		2·0		0·08	2·7		0·03 2·8
29	13·93		45·3		31·58		61·8	26·42	92·4
ept. 8	13·79	0·14	47·1	1·8	31·44	0·14	2·5 64·3	26·35	0·07 94·9 2·5
18	13·59	0·20	48·8	1·7	31·26	0·18	2·2 66·5	26·23	0·12 97·2 2·3
28	13·34	0·25	50·2	1·4	31·05	0·21	1·8 68·3	26·08	0·15 99·0 1·8
		0·29		1·1		0·24	1·3		0·18 1·5
ct. 8	13·05		51·3		30·81		69·6	25·90	100
18	12·74	0·31	52·0	0·7	30·56	0·25	0·9 70·5	25·70	0·20 1
28	12·43	0·31	52·3	0·3	30·30	0·26	0·4 70·9	25·50	0·20
ov. 7	12·14	0·29	52·2	0·1	30·04	0·26	0·1 70·8	25·29	0·21
		0·27		0·5		0·25	0·6		0·2
17	11·87		51·7		29·79		70·2	25·09	
27	11·65	0·22	50·7	1·0	29·56	0·23	1·1 69·1	24·90	
ec. 7	11·48	0·17	49·4	1·3	29·37	0·19	1·6 67·5	24·74	
17	11·38	0·10	47·7	1·7	29·21	0·16	2·0 65·5	24·61	
		0·03		2·0		0·12	2·4		
27	11·35		45·7		29·09		63·1	24·51	
37	11·39	0·04	43·6	2·1	29·02	0·07	2·7 60·4	24·45	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	λ Ursæ Minoris.			α² Capricorni.		
	R. A.		Dec. *North.*	R. A.		Dec. *South.*
	h 20		° 88	h 20		° 12
	m s	s	′ ″ ″	m s	s	′ ″ ″
Jan. 1	7 31·16	5·31	52 32·6 3·0	9 58·25	0·06	59 37·7 0·4
11	25·85	3·34	29·6 3·6	58·31	0·11	38·1 0·3
21	22·51	0·71	26·0 3·2	58·42	0·14	38·4 0·3
31	21·80	1·51	22·8 3·3	58·56	0·16	38·7 0·1
Feb. 10	23·31	3·61	19·5 3·0	58·72	0·20	38·8 0·1
20	26·92	5·55	16·5 2·8	58·92	0·22	38·7 0·2
Mar. 2	32·47	7·23	13·7 2·3	59·14	0·25	38·5 0·3
12	39·70	8·58	11·4 1·9	59·39	0·27	38·2 0·6
22	48·28	9·55	9·5 1·3	59·66	0·28	37·6 0·7
Apr. 1	7 57·83	10·16	8·2 0·7	9 59·94	0·30	36·9 0·9
11	8 7·99	10·35	7·5 0·0	10 0·24	0·32	36·0 1·1
21	18·34	10·12	7·5 0·5	0·56	0·32	34·9 1·1
May 1	28·46	9·56	8·0 1·1	0·88	0·31	33·8 1·3
11	38·02	8·66	9·1 1·6	1·19	0·32	32·5 1·3
21	46·68	7·45	10·7 2·1	1·51	0·30	31·2 1·2
31	8 54·13	6·05	12·8 2·5	1·81	0·29	30·0 1·3
June 10	9 0·18	4·44	15·3 2·9	2·10	0·26	28·7 1·1
20	4·62	2·73	18·2 3·1	2·36	0·22	27·6 1·1
30	7·35	0·93	21·3 3·3	2·58	0·19	26·5 0·9
July 10	8·28	0·91	24·6 3·4	2·77	0·15	25·6 0·7
20	7·37	2·71	28·0 3·4	2·92	0·11	24·9 0·6
30	4·66	4·48	31·4 3·3	3·03	0·06	24·3 0·4
Aug. 9	9 0·18	6·14	34·7 3·2	3·09	0·01	23·9 0·3
19	8 54·04	7·68	37·9 3·0	3·10	0·03	23·6 0·0
29	46·36	9·08	40·9 2·7	3·07	0·07	23·6 0·0
Sept. 8	37·28	10·32	43·6 2·4	3·00	0·10	23·6 0·2
18	26·96	11·34	46·0 2·0	2·90	0·13	23·8 0·2
28	15·62	12·14	48·0 1·6	2·77	0·15	24·0 0·3
Oct. 8	8 3·48	12·70	49·6 1·1	2·62	0·15	24·3 0·3
18	7 50·78	12·98	50·7 0·6	2·47	0·16	24·6 0·4
28	37·80	12·99	51·3 0·1	2·31	0·14	25·0 0·4
Nov. 7	24·81	12·65	51·4 0·4	2·17	0·12	25·4 0·4
17	12·16	12·02	51·0 1·1	2·05	0·09	25·8 0·4
27	7 0·14	11·04	49·9 1·5	1·96	0·07	26·2 0·4
Dec. 7	6 49·10	9·75	48·4 2·1	1·89	0·03	26·6 0·4
17	39·35	8·19	46·3 2·5	1·86	0·01	27·0 0·4
27	31·16	6·31	43·8 2·8	1·87	0·05	27·4 0·4
37	6 24·85		52 41·0	10 1·92		59 27·8

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Pavonis.			α Cygni.			61¹ Cygni.		
	R. A.		Dec. *South.*	R. A.		Dec. *North.*	R. A.		Dec. *North.*
	h m	s	° ′ ″	h m	s	° ′ ″	h m	s	° ′ ″
	20 14		57 11	20 36		44 45	21 0		38 1
Jan. 1		6·02	55·1		26·90	49·5		21·67	78·0
		0·07	2·2		0·05	2·9		0·05	2·4
11		6·09	52·9		26·85	46·6		21·62	75·6
		0·14	2·3		0·01	2·9		0·00	2·6
21	{6·23 / 6·25}		{50·6 / 50·3}		26·86	43·7		21·62	73·0
		0·20	2·4		0·06	3·3		0·04	2·6
31		6·45	47·9		26·92	40·4		21·66	70·4
		0·27	2·4		0·10	3·0		0·10	2·9
Feb. 10		6·72	45·5		27·02	37·4		21·76	67·5
		0·33	2·3		0·16	2·7		0·13	2·4
20		7·05	43·2		27·18	34·7		21·89	65·1
		0·37	2·2		0·20	2·4		0·18	2·1
Mar. 2		7·42	41·0		27·38	32·3		22·07	63·0
		0·42	2·1		0·25	1·9		0·21	1·8
12		7·84	38·9		27·63	30·4		22·28	61·2
		0·46	1·8		0·29	1·5		0·26	1·3
22		8·30	37·1		27·92	28·9		22·54	59·9
		0·48	1·7		0·32	1·0		0·29	0·8
Apr. 1		8·78	35·4		28·24	27·9		22·83	59·1
		0·51	1·4		0·34	0·3		0·32	0·3
11		9·29	34·0		28·58	27·6		23·15	58·8
		0·53	1·1		0·37	0·2		0·34	0·2
21		9·82	32·9		28·95	27·8		23·49	59·0
		0·54	0·9		0·37	0·8		0·35	0·8
May 1		10·36	32·0		29·32	28·6		23·84	59·8
		0·53	0·4		0·38	1·3		0·37	1·4
11		10·89	31·6		29·70	29·9		24·21	61·2
		0·53	0·2		0·36	1·9		0·36	1·8
21		11·42	31·4		30·06	31·8		24·57	63·0
		0·50	0·2		0·35	2·3		0·35	2·2
31		11·92	31·6		30·41	34·1		24·92	65·2
		0·47	0·6		0·32	2·7		0·33	2·6
June 10		12·39	32·2		30·73	36·8		25·25	67·8
		0·43	0·8		0·28	2·9		0·30	2·9
20		12·82	33·0		31·01	39·7		25·55	70·7
		0·37	1·2		0·25	3·2		0·26	3·0
30		13·19	34·2		31·26	42·9		25·81	73·7
		0·31	1·5		0·19	3·3		0·23	3·2
July 10		13·50	35·7		31·45	46·2		26·04	76·9
		0·24	1·7		0·14	3·3		0·18	3·3
20		13·74	37·4		31·59	49·5		26·22	80·2
		0·17	1·9		0·08	3·3		0·13	3·2
30		13·91	39·3		31·67	52·8		26·35	83·4
		0·08	2·0		0·02	3·2		0·07	3·2
Aug. 9		13·99	41·3		31·69	56·0		26·42	86·6
		0·01	2·0		0·03	3·1		0·03	3·0
19		14·00	43·3		31·66	59·1		26·45	89·6
		0·07	2·0		0·08	2·7		0·03	2·8
29		13·93	45·3		31·58	61·8		26·42	92·4
		0·14	1·8		0·14	2·5		0·07	2·5
Sept. 8		13·79	47·1		31·44	64·3		26·35	94·9
		0·20	1·7		0·18	2·2		0·12	2·3
18		13·59	48·8		31·26	66·5		26·23	97·2
		0·25	1·4		0·21	1·8		0·15	1·8
28		13·34	50·2		31·05	68·3		26·08	99·0
		0·29	1·1		0·24	1·3		0·18	1·5
Oct. 8		13·05	51·3		30·81	69·6		25·90	100·5
		0·31	0·7		0·25	0·9		0·20	1·1
18		12·74	52·0		30·56	70·5		25·70	101·6
		0·31	0·3		0·26	0·4		0·20	0·6
28		12·43	52·3		30·30	70·9		25·50	102·2
		0·29	0·1		0·26	0·1		0·21	0·2
Nov. 7		12·14	52·2		30·04	70·8		25·29	102·4
		0·27	0·5		0·25	0·6		0·20	0·3
17		11·87	51·7		29·79	70·2		25·09	102·1
		0·22	1·0		0·23	1·1		0·19	0·8
27		11·65	50·7		29·56	69·1		24·90	101·3
		0·17	1·3		0·19	1·6		0·16	1·2
Dec. 7		11·48	49·4		29·37	67·5		24·74	100·1
		0·10	1·7		0·16	2·0		0·13	1·6
17		11·38	47·7		29·21	65·5		24·61	98·5
		0·03	2·0		0·12	2·4		0·10	2·0
27		11·35	45·7		29·09	63·1		24·51	96·5
		0·04	2·1		0·07	2·7		0·06	2·3
37		11·39	43·6		29·02	60·4		24·45	94·2

APPARENT PLACES OF THE PRINCIPAL FIXED STAR
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	ζ Cygni.				α Cephei.				β Aquar	
	R.A.		Dec. *North.*		R.A.		Dec. *North.*		R.A.	
	h m	s	° ′	″	h m	s	° ′	″	h m	s
	21 6		29 37		21 15		61 57		21 23	
Jan. 1	43·91	0·04	60·4	2·2	3·83	0·21	83·1	2·7	53·52	0·00
11	43·87	0·00	58·2	2·3	3·62	0·14	80·4	3·0	53·52	0·02
21	43·87	0·04	55·9	2·4	3·48	0·07	77·4	3·2	53·54	0·05
31	43·91		53·5		3·41		74·2		53·59	
		0·08		2·6		0·02		3·5		0·10
Feb. 10	43·99	0·12	50·9	2·1	3·43	0·11	70·7	3·2	53·69	0·11
20	44·11	0·16	48·8	1·9	3·54	0·19	67·5	2·9	53·80	0·15
Mar. 2	44·27	0·19	46·9	1·5	3·73	0·26	64·6	2·7	53·95	0·18
12	44·46		45·4		3·99		61·9		54·13	
		0·23		1·1		0·34		2·2		0·21
22	44·69	0·26	44·3	0·7	4·33	0·40	59·7	1·7	54·34	0·23
Apr. 1	44·95	0·29	43·6	0·2	4·73	0·45	58·0	1·1	54·57	0·26
11	45·24	0·30	43·4	0·3	5·18	0·48	56·9	0·5	54·83	0·29
21	45·54		43·7		5·66		56·4		55·12	
		0·33		0·9		0·51		0·1		0·30
May 1	45·87	0·33	44·6	1·3	6·17	0·52	56·5	0·8	55·42	0·31
11	46·20	0·33	45·9	1·7	6·69	0·52	57·3	1·3	55·73	0·32
21	46·53	0·33	47·6	2·0	7·21	0·49	58·6	1·9	56·05	0·32
31	46·86		49·6		7·70		60·5		56·37	
		0·31		2·4		0·46		2·3		0·31
June 10	47·17	0·28	52·0	2·7	8·16	0·42	62·8	2·8	56·68	0·29
20	47·45	0·26	54·7	2·8	8·58	0·36	65·6	3·1	56·97	0·27
30	47·71	0·22	57·5	2·9	8·94	0·28	68·7	3·3	57·24	0·25
July 10	47·93		60·4		9·22		72·0		57·49	
		0·17		2·9		0·22		3·6		0·21
20	48·10	0·13	63·3	2·9	9·44	0·14	75·6	3·6	57·70	0·16
30	48·23	0·08	66·2	2·7	9·58	0·05	79·2	3·7	57·86	0·12
Aug. 9	48·31	0·04	68·9	2·6	9·63	0·02	82·9	3·5	57·98	0·08
19	48·35		71·5		9·61		86·4		58·06	
		0·02		2·4		0·10		3·5		0·04
29	48·33	0·06	73·9	2·2	9·51	0·18	89·9	3·2	58·10	0·01
Sept. 8	48·27	0·09	76·1	1·8	9·33	0·24	93·1	2·9	58·09	0·05
18	48·18	0·13	77·9	1·5	9·09	0·30	96·0	2·6	58·04	0·08
28	48·05		79·4		8·79		98·6		57·96	
		0·16		1·2		0·35		2·2		0·10
Oct. 8	47·89	0·17	80·6	0·8	8·44	0·38	100·8	1·8	57·86	0·13
18	47·72	0·19	81·4	0·4	8·06	0·41	102·6	1·2	57·73	0·13
28	47·53	0·18	81·8	0·0	7·65	0·43	103·8	0·7	57·60	0·13
Nov. 7	47·35		81·8		7·22		104·5		57·47	
		0·18		0·4		0·43		0·1		0·13
17	47·17	0·16	81·4	0·8	6·79	0·41	104·6	0·4	57·34	0·12
27	47·01	0·14	80·6	1·2	6·38	0·38	104·2	1·0	57·22	0·10
Dec. 7	46·87	0·12	79·4	1·5	6·00	0·35	103·2	1·6	57·12	0·07
17	46·75		77·9		5·65		101·6		57·05	
		0·09		1·9		0·30		2·1		0·05
27	46·66	0·05	76·0	2·1	5·35	0·25	99·5	2·5	57·00	0·02
37	46·61		73·9		5·10		97·0		56·98	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS,
FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	β Cephei.				ε Pegasi.				α Aquarii.			
	R.A.		Dec. North.		R.A.		Dec. North.		R.A.		Dec. South.	
	h m		° ′		h m		° ′		h m		° ′	
	21 26		69 55		21 37		9 12		21 58		1 1	
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	42·41	0·36	33·7	2·6	2·07	0·02	37·8	1·3	18·40	0·04	30·1	0·8
11	42·05	0·27	31·1	2·9	2·05	0·01	36·5	1·3	18·36	0·01	30·9	0·8
21	41·78	0·16	28·2	3·2	2·04	0·03	35·2	1·3	18·35	0·02	31·7	0·6
31	41·62		25·0		2·07		33·9		18·37		32·3	
		0·05		3·6		0·06		1·3		0·04		0·6
Feb. 10	41·57	0·08	21·4	3·3	{1·73 / 1·74}	0·10	{32·8 / 32·1}	1·0	18·41	0·09	32·9	0·4
20	41·65	0·20	18·1	3·1	2·24	0·13	31·5	0·8	18·50	0·11	33·3	0·2
Mar. 2	41·85	0·30	15·0	2·8	2·37	0·16	30·7	0·6	18·61	0·14	33·5	0·1
12	42·15		12·2		2·53		30·1		18·75		33·4	
		0·41		2·4		0·19		0·2		0·18		0·3
22	42·56		9·8		2·72		29·9		18·93		33·1	
Apr. 1	43·05	0·49	7·9	1·9	2·94	0·22	30·0	0·1	19·13	0·20	32·6	0·5
11	43·62	0·57	6·5	1·4	3·19	0·25	30·4	0·4	19·37	0·24	31·7	0·9
21	44·25	0·63	5·7	0·8	3·46	0·27	31·2	0·8	19·63	0·26	30·6	1·1
		0·66		0·2		0·30		1·2		0·29		1·4
May 1	44·91		5·5		3·76		32·4		19·92		29·2	
11	45·58	0·67	5·9	0·4	4·06	0·30	33·8	1·4	20·22	0·30	27·6	1·6
21	46·25	0·67	7·0	1·1	4·38	0·32	35·5	1·7	20·53	0·31	25·8	1·8
31	46·90	0·65	8·6	1·6	4·70	0·32	37·4	1·9	20·85	0·32	24·0	1·8
		0·60		2·2		0·30		2·1		0·32		2·0
June 10	47·50		10·8		5·00		39·5		21·17		22·0	
20	48·04	0·54	13·4	2·6	5·30	0·30	41·7	2·2	21·48	0·31	20·1	1·9
30	48·50	0·46	16·4	3·0	5·57	0·27	43·9	2·2	21·76	0·28	18·1	2·0
July 10	48·88	0·38	19·6	3·2	5·81	0·24	46·1	2·2	22·02	0·26	16·3	1·8
		0·28		3·5		0·21		2·1		0·23		1·7
20	49·16		23·1		6·02		48·2		22·25		14·6	
30	49·34	0·18	26·8	3·7	6·19	0·17	50·3	2·1	22·44	0·19	13·0	1·6
Aug. 9	49·41	0·07	30·5	3·7	6·32	0·13	52·1	1·8	22·60	0·16	11·6	1·4
19	49·37	0·04	34·2	3·7	6·40	0·08	53·8	1·7	22·71	0·11	10·5	1·1
		0·14		3·6		0·04		1·5		0·06		0·9
29	49·23		37·8		6·44		55·3		22·77		9·6	
Sept. 8	48·99	0·24	41·2	3·4	6·43	0·01	56·5	1·2	22·79	0·02	8·8	0·8
18	48·66	0·33	44·4	3·2	6·39	0·04	57·6	1·1	22·77	0·02	8·3	0·5
28	48·25	0·41	47·2	2·8	6·31	0·08	58·3	0·7	22·72	0·05	8·1	0·2
		0·48		2·5		0·10		0·5		0·08		0·1
Oct. 8	47·77		49·7		6·21		58·8		22·64		8·0	
18	47·23	0·54	51·8	2·1	6·09	0·12	59·1	0·3	22·54	0·10	8·0	0·0
28	46·65	0·58	53·3	1·5	5·96	0·13	59·2	0·1	22·42	0·12	8·3	0·3
Nov. 7	46·05	0·60	54·3	1·0	5·82	0·14	59·0	0·2	22·29	0·13	8·6	0·3
		0·61		0·5		0·13		0·4		0·12		0·3
17	45·44		54·8		5·69		58·6		22·17		9·1	
27	44·83	0·61	54·6	0·2	5·56	0·13	57·9	0·7	22·05	0·12	9·7	0
Dec. 7	44·25	0·58	53·9	0·7	5·45	0·11	57·1	0·8	21·94	0·11	10·4	
17	43·71	0·54	52·6	1·3	5·36	0·09	56·1	1·0	21·85	0·09	11·1	
		0·48		1·9		0·07		1·1		0·07		
27	43·23		50·7		5·29		55·0		21·78		11	
37	42·83	0·40	48·4	2·3	5·25	0·04	53·8	1·2	21·74	0·04	12	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Gruis.				ζ Pegasi.				α Piscis Australis. (*Fomalhaut*)			
	R. A.		Dec. *South.*		R. A.		Dec. *North.*		R. A.		Dec. *South.*	
	h	m	°	′	h	m	°	′	h	m	°	′
	21	59	47	39	22	34	10	4	22	49	30	23
	s	s	″	″	s	s	″	″	s	s	″	″
Jan. 1	2·59	0·08	57·1	1·4	12·28	0·07	27·6	1·1	36·35	0·08	39·5	0·4
11	2·51	0·03	55·7	1·8	12·21	0·04	26·5	1·1	36·27	0·06	39·1	0·7
21	2·48	0·02	53·9	2·0	12·17	0·02	25·4	1·2	36·21	0·03	38·4	1·0
31	2·50		51·9		12·15		24·2		36·18		37·4	
		0·06		2·2		0·00		1·1		0·00		1·2
Feb. 10	2·56	0·11	49·7	2·6	12·15	0·03	23·1	1·0	36·18	0·03	36 2	1·5
20	2·67	0·16	47·1	2·5	12·18	0·08	22·1	0·8	36·21	0·07	34·7	1·8
Mar. 2	2·83	0·21	44·6	2·6	12·26	0·10	21·3	0·6	36·28	0·11	32·9	1·9
12	3·04		42·0		12·36		20·7		36·39		31·0	
		0·24		2·5		0·14		0·3		0·14		2·0
22	3·28	0·29	39·5	2·6	12·50	0·18	20·4	0·0	36·53	0·18	29·0	2·2
Apr. 1	3·57	0·33	36·9	2·5	12·68	0·20	20·4	0·4	36·71	0·22	26·8	2·3
11	3·90	0·37	34·4	2·3	12·88	0·25	20·8	0·7	36·93	0·26	24·5	2·3
21	4·27		32·1		13·13		21·5		37·19		22·2	
		0·39		2·1		0·27		1·0		0·29		2·3
May 1	4·66	0·42	30·0	1·9	13·40	0·29	22·5	1·3	37·48	0·31	19·9	2·2
11	5·08	0·44	28·1	1·7	13·69	0·31	23·8	1·7	37·79	0·34	17·7	2·2
21	5·52	0·44	26·4	1·3	14·00	0·32	25·5	1·8	38·13	0·36	15·5	2·0
31	5·96		25·1		14·32		27·3		38·49		13·5	
		0·44		1·0		0·32		2·0		0·37		1·8
June 10	6·40	0·43	24·1	0·6	14·64	0·32	29·3	2·2	38·86	0·36	11·7	1·6
20	6·83	0·40	23·5	0·3	14·96	0·30	31·5	2·2	39·22	0·35	10·1	1·2
30	7·23	0·37	23·2	0·2	15·26	0·28	33·7	2·3	39·57	0·33	8·9	1·0
July 10	7·60		23·4		15·54		36·0		39·90		7·9	
		0·32		0·6		0·25		2·2		0·30		0·6
20	7·92	0·28	24·0	0·9	15·79	0·22	38·2	2·1	40·20	0·27	7·3	0·3
30	8·20	0·22	24·9	1·2	16·01	0·18	40·3	2·0	40·47	0·23	7·0	0·1
Aug. 9	8·42	0·15	26·1	1·5	16·19	0·13	42·3	1·8	40·70	0·19	7·1	0·4
19	8·57		27·6		16·32		44·1		40·89		7·5	
		0·09		1·7		0·10		1·7		0·13		0·7
29	8·66	0·02	29·3	1·9	16·42	0·05	45·8	1·4	41·02	0·08	8·2	0·9
Sept. 8	8·68	0·03	31·2	1·9	16·47	0·01	47·2	1·2	41·10	0·04	9·1	1·2
18	8·65	0·09	33·1	1·8	16·48	0·02	48·4	0·9	41·14	0·01	10·3	1·3
28	8·56		34·9		16·46		49·3		41·13		11·6	
		0·14		1·8		0·05		0·7		0·05		1·3
Oct. 8	8·42	0·17	36·7	1·6	16·41	0·08	50·0	0·5	41·08	0·08	12·9	1·4
18	8·25	0·20	38·3	1·3	16·33	0·10	50·5	0·2	41·00	0·11	14·3	1·3
28	8·05	0·22	39·6	1·1	16·23	0·12	50·7	0·0	40·89	0·13	15·6	1·2
Nov. 7	7·83		40·7		16·11		50·7		40·76		16·8	
		0·22		0·6		0·12		0·2		0·14		1·1
17	7·61	0·21	41·3	0·3	15·99	0·12	50·5	0·4	40·62	0·14	17·9	0·8
27	7·40	0·19	41·6	0·1	15·87	0·11	50·1	0·6	40·48	0·14	18·7	0·5
Dec. 7	7·21	0·16	41·5	0·6	15·76	0·11	49·5	0·8	40·34	0·13	19·2	0·3
17	7·05		40·9		15·65		48·7		40·21		19·5	
		0·13		0·9		0·09		0·9		0·11		0·0
27	6·92	0·10	40·0	1·3	15·56	0·08	47·8	1·1	40·10	0·10	19·5	0·3
37	6·82		38·7		15·48		46·7		40·00		19·2	

APPARENT PLACES OF THE PRINCIPAL FIXED STARS, FOR THE UPPER TRANSIT AT GREENWICH.

Day of the Month.	α Pegasi. (*Markab*) R. A.		Dec. *North.*		ι Piscium. R. A.		Dec. *North.*		γ Cephei. R. A.		Dec. *North.*	
	h m	s	° ′	″	h m	s	° ′	″	h m	s	° ′	″
	22 57		14 25		23 32		4 50		23 33		76 49	
Jan. 1	30·97	0·09	30·4	1·1	28·43	0·09	21·1	0·8	22·07	0·86	36·9	0·9
11	30·88	0·07	29·3	1·2	28·34	0·08	20·3	0·8	21·21	0·79	36·0	1·5
21	30·81	0·04	28·1	1·3	28·26	0·06	19·5	0·7	20·42	0·70	34·5	2·0
31	30·77		26·8		28·20		18·8		19·72		32·5	
		0·02		1·2		0·05		0·7		0·58		2·5
Feb. 10	30·75	0·01	25·6	1·2	28·15	0·02	18·1	0·6	19·14	0·43	30·0	2·7
20	30·76	0·04	24·4	1·0	28·13	0·01	17·5	0·4	18·71	0·27	27·3	3·0
Mar. 2	30·80	0·09	23·4	0·9	28·14	0·05	17·1	0·3	18·44	0·10	24·3	3·1
12	30·89		22·5		28·19		16·8		18·34		21·2	
		0·11		0·6		0·09		0·1		0·10		3·3
22	31·00		21·9		28·28		16·9		18·44		17·9	
Apr. 1	31·16	0·16	21·7	0·2	28·40	0·12	17·2	0·3	18·73	0·29	15·0	2·9
11	31·35	0·19	21·8	0·1	28·55	0·15	17·8	0·6	19·18	0·45	12·4	2·6
21	31·57	0·22	22·3	0·5	28·75	0·20	18·6	0·8	19·79	0·61	10·3	2·1
		0·26		0·8		0·23		1·2		0·74		1·8
May 1	31·83		23·1		28·98		19·8		20·53		8·5	
11	32·12	0·29	24·2	1·1	29·24	0·26	21·2	1·4	21·38	0·85	7·3	1·2
21	32·43	0·31	25·7	1·5	29·53	0·29	22·8	1·6	22·31	0·93	6·7	0·6
31	32·75	0·32	27·4	1·7	29·84	0·31	24·6	1·8	23·29	0·98	6·6	0·1
		0·32		2·0		0·32		2·0		1·00		0·5
June 10	33·07		29·4		30·16		26·6		24·29		7·1	
20	33·40	0·33	31·6	2·2	30·49	0·33	28·7	2·1	25·29	1·00	8·2	1·1
30	33·71	0·31	33·8	2·2	30·81	0·32	30·8	2·1	26·25	0·96	9·9	1·7
July 10	34·00	0·29	36·2	2·4	31·11	0·30	32·9	2·1	27·15	0·90	12·0	2·1
		0·27		2·3		0·29		2·0		0·83		2·6
20	34·27		38·5		31·40		34·9		27·98		14·6	
30	34·51	0·24	40·8	2·3	31·66	0·26	36·9	2·0	28·70	0·72	17·5	2·9
Aug. 9	34·71	0·20	43·0	2·2	31·89	0·23	38·7	1·8	29·30	0·60	20·8	3·3
19	34·87	0·16	45·1	2·1	32·08	0·19	40·3	1·6	29·78	0·48	24·3	3·5
		0·11		1·9		0·16		1·4		0·34		3·8
29	34·98		47·0		32·24		41·7		30·12		28·1	
Sept. 8	35·06	0·08	48·7	1·7	32·35	0·11	42·8	1·1	30·32	0·20	31·9	3·8
18	35·09	0·03	50·2	1·5	32·43	0·08	43·8	1·0	30·38	0·06	35·7	3·8
28	35·09	0·00	51·4	1·2	32·46	0·03	44·5	0·7	30·30	0·08	39·5	3·8
		0·03		1·0		0·01		0·4		0·23		
Oct. 8	35·06		52·4		32·47		44·9		30·07		43	
18	34·99	0·07	53·1	0·7	32·44	0·03	45·2	0·3	29·72	0·35	4(	
28	34·91	0·08	53·6	0·5	32·39	0·05	45·3	0·1	29·24	0·48	4(	
Nov. 7	34·81	0·10	53·8	0·2	32·31	0·08	45·1	0·2	28·64	0·60	5:	
		0·12		0·0		0·08		0·3		0·69		
17	34·69		53·8		32·23		44·8		27·95			
27	34·58	0·11	53·5	0·3	32·13	0·10	44·4	0·4	27·18	0·77		
Dec. 7	34·46	0·12	53·0	0·5	32·03	0·10	43·8	0·6	26·34	0·84		
17	34·34	0·12	52·3	0·7	31·92	0·11	43·2	0·6	25·46	0·88		
		0·10		0·9		0·10		0·7		0·88		
27	34·24		51·4		31·82		42·5		24·58			
37	34·15	0·09	50·4	1·0	31·73	0·09	41·7	0·8	23·72	0·86		

TABLE,

Showing the *Correction* to be applied to the *preceding* Apparent Places of Five Polar Stars, for the terms of Nutation involving 2 ☾.

Arg.		α Urs. Min.		51 Cephei.		σ Octantis.		δ Urs. Min.		λ Urs. Min.		*A*
☾		R.A.	Dec.	R.A.	Dec.	R.A.	Dec.	R.A.	Dec.	R.A.	Dec.	☾
°	°	s	″	s	″	s	″	s	″	s	″	°
0	180	−·229	+·03	+·018	+·09	−·025	−·09	−·008	−·09	−·159	−·08	90
1	181	·231	·02	·014	·09	·040	·09	·005	·09	·151	·08	91
2	182	·233	·02	·009	·09	·055	·09	−·003	·09	·143	·08	92
3	183	·235	·02	·005	·09	·070	·09	·000	·09	·135	·08	93
4	184	·237	·01	+·001	·09	·085	·09	+·003	·09	·127	·08	94
5	185	·238	·01	−·003	·09	·100	·09	·006	·09	·118	·08	95
6	186	·239	+·01	·008	·09	·115	·08	·008	·09	·109	·08	96
7	187	·240	·00	·012	·09	·130	·08	·011	·09	·100	·08	97
8	188	·240	·00	·017	·09	·144	·08	·013	·09	·091	·08	98
9	189	·240	·00	·021	·09	·158	·08	·016	·09	·082	·08	99
10	190	·240	·00	·025	·09	·172	·08	·019	·09	·073	·09	100
11	191	·240	−·01	·029	·09	·186	·08	·021	·09	·064	·09	101
12	192	·239	·01	·033	·09	·200	·08	·024	·09	·055	·09	102
13	193	·238	·01	·037	·08	·213	·08	·026	·08	·046	·09	103
14	194	·236	·02	·041	·08	·226	·08	·029	·08	·036	·09	104
15	195	·235	·02	·045	·08	·239	·08	·032	·08	·026	·09	105
16	196	·233	·02	·049	·08	·251	·07	·034	·08	·017	·09	106
17	197	·231	·02	·053	·08	·263	·07	·037	·08	−·008	·09	107
18	198	·229	·03	·056	·08	·275	·07	·039	·08	+·002	·09	108
19	199	·226	·03	·060	·08	·287	·07	·042	·08	·012	·09	109
20	200	·223	·03	·065	·08	·299	·07	·044	·07	·022	·09	110
21	201	·220	·03	·069	·07	·310	·07	·046	·07	·032	·09	111
22	202	·216	·04	·073	·07	·320	·06	·048	·07	·041	·09	112
23	203	·212	·04	·076	·07	·330	·06	·050	·07	·050	·09	113
24	204	·208	·04	·079	·07	·340	·06	·052	·07	·060	·08	114
25	205	·204	·04	·082	·07	·350	·06	·054	·06	·070	·08	115
26	206	·200	·05	·085	·06	·359	·05	·055	·06	·079	·08	116
27	207	·196	·05	·088	·06	·368	·05	·057	·06	·088	·08	117
28	208	·190	·05	·091	·06	·376	·05	·059	·06	·097	·08	118
29	209	·185	·05	·094	·05	·383	·04	·061	·06	·106	·08	119
30	210	·179	·05	·097	·05	·390	·04	·063	·05	·115	·08	120
31	211	·173	·06	·100	·05	·396	·04	·064	·05	·124	·08	121
32	212	·168	·06	·103	·05	·402	·03	·065	·05	·133	·08	122
33	213	·162	·06	·105	·04	·408	·03	·067	·04	·142	·07	123
34	214	·155	·06	·107	·04	·413	·03	·068	·04	·150	·07	124
35	215	·148	·06	·109	·04	·418	·03	·070	·04	·158	·07	125
36	216	·141	·07	·111	·04	·423	·02	·071	·04	·165	·07	126
37	217	·133	·07	·113	·03	·427	·02	·072	·03	·172	·06	127
38	218	·126	·07	·115	·03	·430	·01	·073	·03	·179	·06	128
39	219	·119	·07	·116	·03	·432	·01	·074	·03	·186	·06	129
40	220	·113	·07	·117	·03	·434	−·01	·075	·02	·193	·06	130
41	221	·106	·07	·118	·02	·435	·00	·076	·02	·199	·05	131
42	222	·099	·08	·119	·02	·436	·00	·077	·02	·206	·05	132
43	223	·092	·08	·120	·01	·436	·00	·077	·02	·212	·05	133
44	224	·084	·08	·121	·01	·436	·00	·078	·01	·218	·05	134
45	225	−·075	−·08	−·122	+·01	−·436	+·01	+·078	−·01	+·224	−·04	135

NOTE.—When the *Argument* is on the *right*-hand side of the Table, the sign of the correction must be changed.

TABLE,

Showing the *Correction* to be applied to the *preceding* Apparent Places of Five Polar Stars, for the terms of Nutation involving 2 ☾.

g.	α Urs. Min.		51 Cephei.		σ Octantis.		δ Urs. Min.		λ Urs. Min.		*Arg.*	
	R.A.	Dec.	R.A.	Dec.	R.A.	Dec.	R.A.	Dec.	R.A.	Dec.	☾	
°	s	″	s	″	s	″	s	″	s	″	°	°
225	−·075	−·08	−·122	+·01	−·436	+·01	+·078	−·01	+·224	−·04	135	315
226	·067	·08	·123	·00	·435	·01	·078	−·01	·229	·04	136	316
227	·058	·08	·124	·00	·433	·02	·079	·00	·234	·04	137	317
228	·050	·08	·124	·00	·431	·02	·079	·00	·239	·04	138	318
229	·042	·08	·124	−·01	·428	·02	·078	·00	·244	·04	139	319
230	·034	·08	·124	·01	·425	·02	·078	+·01	·249	·03	140	320
231	·026	·08	·123	·01	·421	·03	·078	·01	·253	·03	141	321
232	·017	·08	·123	·02	·417	·03	·078	·01	·256	·03	142	322
233	−·008	·08	·122	·02	·412	·03	·077	·02	·259	·02	143	323
234	·000	·08	·122	·02	·407	·04	·077	·02	·262	·02	144	324
235	+·008	·08	·121	·02	·401	·04	·076	·02	·265	·02	145	325
236	·016	·08	·121	·03	·395	·04	·075	·03	·267	·02	146	326
237	·025	·08	·120	·03	·389	·04	·074	·03	·269	·01	147	327
238	·033	·08	·119	·03	·382	·05	·073	·03	·271	·01	148	328
239	·042	·08	·117	·04	·374	·05	·072	·03	·273	−·01	149	329
240	·050	·08	·115	·04	·365	·05	·071	·04	·274	·00	150	330
241	·058	·08	·114	·04	·356	·05	·070	·04	·275	·00	151	331
242	·066	·08	·112	·04	·347	·06	·069	·04	·275	·00	152	332
243	·074	·08	·110	·05	·338	·06	·068	·05	·275	+·01	153	333
244	·082	·08	·108	·05	·328	·06	·066	·05	·275	·01	154	334
245	·090	·08	·106	·05	·318	·06	·064	·05	·275	·01	155	335
246	·097	·07	·102	·06	·307	·07	·062	·05	·274	·02	156	336
247	·105	·07	·100	·06	·296	·07	·061	·06	·272	·02	157	337
248	·112	·07	·098	·06	·284	·07	·060	·06	·270	·02	158	338
249	·120	·07	·095	·06	·272	·07	·058	·06	·268	·02	159	339
250	·127	·07	·093	·06	·261	·07	·056	·06	·266	·03	160	340
251	·134	·07	·090	·07	·249	·08	·054	·06	·263	·03	161	341
252	·141	·07	·087	·07	·237	·08	·052	·07	·260	·03	162	342
253	·148	·06	·084	·07	·224	·08	·050	·07	·257	·04	163	343
254	·154	·06	·080	·07	·211	·08	·048	·07	·254	·04	164	344
255	·161	·06	·077	·07	·197	·08	·046	·07	·250	·04	165	345
256	·167	·06	·074	·08	·183	·09	·045	·08	·246	·04	166	346
257	·173	·06	·070	·08	·169	·09	·043	·08	·242	·05	167	347
258	·178	·05	·066	·08	·155	·09	·040	·08	·237	·05	168	348
259	·184	·05	·062	·08	·141	·09	·037	·08	·232	·05	169	349
260	·189	·05	·059	·08	·126	·09	·034	·08	·227	·06	170	350
261	·194	·05	·055	·08	·111	·09	·031	·08	·221	·06	17	
262	·199	·04	·050	·08	·096	·09	·030	·08	·215	·06		
263	·204	·04	·047	·09	·081	·09	·027	·08	·209	·0		
264	·207	·04	·043	·09	·066	·09	·024	·09	·203	·0		
265	·212	·04	·039	·09	·051	·09	·022	·09	·196	·		
266	·216	·03	·035	·09	·036	·09	·020	·09	·189			
267	·220	·03	·030	·09	·021	·09	·017	·09	·182			
268	·223	·03	·026	·09	−·006	·09	·013	·09	·175			
269	·226	·03	·022	·09	+·009	·09	·011	·09	·167			
270	+·229	−·03	−·018	−·09	+·025	+·09	+·008	+·09	+·159			

NOTE.—When the *Argument* is on the *right*-hand side of the Table, the sign correction must be changed.

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec in 1 hou of Lon
1855.			h m s	s	s	° ′ ″	″
Jan. 1	β Tauri - -	2	5 17 8·20			N.28 29	
	ζ Tauri - -	3½	5 28 59·38			21 3	
	Moon I. U.	13·1	5 40 0·55	138·73	68·98	26 17 31·5	+198
	Moon I. L.	- -	6 7 49·58	139·31	69·11	26 47 6·0	+ 96
	η Geminor.	4	6 6 8·04			22 33	
	μ Geminor.	3	6 14 11·84			N 22 35	
2	η Geminor.	4	6 6 8·05			N.22 33	
	μ Geminor.	3	6 14 11·85			22 35	
	Moon I. U.	14·1	6 35 40·85	139·10	69·05	26 56 8·0	— 6
	δ Geminor.	3½	7 11 28·23			22 15	
	ι Geminor.	4	7 16 43·66			N.28 5	
3	δ Geminor.	3½	7 11 28·25			N.22 15	
	ι Geminor.	4	7 16 43·68			28 5	
	Moon II.L.	- -	7 5 42·36	138·03	68·79	26 44 41·1	—107
	Moon II.U.	15·1	7 33 8·82	136·26	68·35	26 13 14·3	206
	φ Geminor.	5	7 44 37·72			27 8	
	ψ³ Cancri - -	4	8 1 43·47			N.25 57	
4	φ Geminor.	5	7 44 37·74			N.27 8	
	ψ² Cancri - -	4	8 1 43·49			25 57	
	Moon II.L.	- -	8 0 10·28	133·89	67·75	25 22 37·3	—299
	Moon II.U.	16·2	8 26 40·39	131·08	67·04	24 13 57·6	386
	γ Cancri - -	4½	8 34 53·92			21 59	
	ν Cancri - -	6	8 54 15·80			N.25 1	
5	γ Cancri - -	4½	8 34 53·94			N.21 59	
	ν Cancri - -	6	8 54 15·83			25 1	
	Moon II.L.	- -	8 52 35·01	128·00	66·26	22 48 35·0	—466
	Moon II.U.	17·2	9 17 52·17	124·86	65·45	21 7 58·1	538
	ε Leonis - -	3	9 37 37·26			24 26	
	η Leonis - -	3½	9 59 25·60			N.17 28	
6	ε Leonis - -	3	9 37 37·29			N.24 26	
	η Leonis - -	3½	9 59 25·63			17 28	
	Moon II.L.	- -	9 42 32·07	121·82	64·66	19 13 38·5	—603
	Moon II.U.	18·2	10 6 36·83	119·03	63·93	17 7 7·8	660
	42 Leonis - -	6	10 14 2·43			15 42	
	ρ Leonis *	4	10 25 10·65			N.10 3	
7	42 Leonis - -	6	10 14 2·46			N.15 42	
	ρ Leonis *	4	10 25 10·68			10 3	
	Moon II.L.	- -	10 30 10·15	116·60	63·29	14 49 54·7	—710
	Moon II.U.	19·3	10 53 17·11	114·65	62·77	12 23 25·0	—753
	θ Leonis - -	3	11 6 37·88			16 13	
	ι Leonis *	4	11 16 21·53			N.11 20	
8	θ Leonis - -	3	11 6 37·91			N.16 13	
	ι Leonis *	4	11 16 21·56			N.11 20	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Jan. 8	Moon II. L.	- -	11 16 3·84	113·24	62·40	N. 9 48 59·5	−789·8
	Moon II. U.	20·3	11 38 37·40	112·45	62·20	7 7 56·1	819·7
	o Virginis *	4½	11 57 49·15			9 32	
	η Virginis -	3½	12 12 28·89			N. 0 8	
9	o Virginis *	4½	11 57 49·18			N. 9 32	
	η Virginis -	3½	12 12 28·92			0 8	
	Moon II. L.	- -	12 1 5·42	112·34	62·19	4 21 30·7	−843·5
	Moon II. U.	21·3	12 23 36·37	112·95	62·37	N. 1 30 57·8	860·9
	γ Virginis -	4	12 34 18·43			S. 0 39	
	δ Virginis *	3	12 48 17·50			N. 4 11	
10	γ Virginis -	4	12 34 18·46			S. 0 39	
	δ Virginis *	3	12 48 17·53			N. 4 11	
	Moon II. L.	- -	12 46 19·21	114·33	62·77	S. 1 22 25·0	−871·7
	Moon II. U.	22·3	13 9 23·43	116·52	63·39	4 17 14·3	875·2
	α Virginis -	1	13 17 32·76			S. 10 24	
	ζ Virginis -	4	13 27 17·79			N. 0 9	
11	α Virginis -	1	13 17 32·79			S. 10 24	
	ζ Virginis -	4	13 27 17·82			N. 0 9	
	Moon II. L.	- -	13 32 59·10	119·57	64·24	S. 7 11 58·0	−870·6
	Moon II. U.	23·4	13 57 16·63	123·50	65·30	10 4 50·8	856·5
	κ Virginis -	4	14 5 9·00			9 36	
	λ Virginis -	4	14 11 15·14			S. 12 42	
12	κ Virginis -	4	14 5 9·04			S. 9 36	
	λ Virginis -	4	14 11 15·17			12 42	
	Moon II. L.	- -	14 22 26·73	128·33	66·59	12 53 50·4	−831·4
	Moon II. U.	24·4	14 48 40·00	134·02	68·08	15 36 32·5	793·3
	ζ¹ Libræ - -	4	15 20 3·70			16 12	
	η Libræ - -	4½	15 35 53·82			S. 15 12	
13	ζ¹ Libræ - -	4	15 20 3·73			S. 16 12	
	η Libræ - -	4½	15 35 53·85			15 12	
	Moon II. L.	- -	15 16 6·28	140·48	69·73	18 10 8·2	−740·0
	Moon II. U.	25·4	15 44 53·90	147·54	71·49	S. 20 31 21·8	669·2
14	Moon II. L.	- -	16 15 8·19	154·88	73·28	S. 22 36 31·0	−579·1
	Moon II. U.	26·5	16 46 50·17	162·06	75·00	24 21	6
15	Moon II. L.	- -	17 19 54·74	168·53	76·50	S. 25	
	Moon II. U.	27·5	17 54 9·64	173·67	77·68	26	
16	Moon II. L.	- -	18 29 15·29	176·90	78·41	S. 26	
	Moon II. U.	28·6	19 4 46·26	177·85	78·61	26	
17	Moon II. L.	- -	19 40 14·35	176·43	78·27	S. 2	
18	Moon I. U.	0·1	20 12 37·52	173·09	77·44	S.	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Jan. 18	Moon I. L.	- -	20 46 45·43	168·01	76·24	S. 22 59 29·6	+600·3
19	Moon I. U.	1·2	21 19 45·66	161·92	74·79	S. 20 47 5·2	+719·9
	Moon I. L.	- -	21 51 29·77	155·42	73·24	18 13 0·6	816·8
20	Moon I. U.	2·2	22 21 56·08	149·03	71·68	S. 15 21 51·8	+890·8
	Moon I. L.	- -	22 51 8·15	143·10	70·23	12 18 8·3	942·9
21	Moon I. U.	3·2	23 19 13·25	137·89	68·92	S. 9 6 1·6	+975·1
	Moon I. L.	- -	23 46 20·84	133·53	67·82	5 49 17·0	989·6
22	30 Piscium -	4½	23 54 30·19			S. 6 49	
	33 Piscium -	5	23 57 53·59			6 31	
	Moon I. U.	4·3	0 12 41·46	130·06	66·94	S. 2 31 12·4	+988·1
	Moon I. L.	- -	0 38 25·97	127·51	66·29	N. 0 45 20·7	974·7
	δ Piscium *	5	0 41 8·68			6 48	
	ε Piscium *	4	0 55 24·36			N. 7 6	
23	δ Piscium *	5	0 41 8·67			N. 6 48	
	ε Piscium *	4	0 55 24·35			7 6	
	Moon I. U.	5·3	1 3 45·12	125·83	65·87	3 57 54·2	+949·7
	Moon I. L.	- -	1 28 49·04	124·96	65·66	7 4 19·2	913·3
	μ Piscium *	4½	1 22 34·60			5 24	
	ν Piscium *	5	1 33 52·53			N. 4 45	
24	μ Piscium *	4½	1 22 34·60			N. 5 24	
	ν Piscium *	5	1 33 52·52			4 45	
	Moon I. U.	6·3	1 53 47·19	124·85	65·64	10 2 41·6	+868
	Moon I. L.	- -	2 18 48·05	125·40	65·80	12 51 18·5	816
	ξ¹ Ceti - - *	5	2 5 18·48			8 10	
	ξ² Ceti - - *	4	2 20 26·75			N. 7 48	
25	ξ¹ Ceti - - *	5	2 5 18·46			N. 8 10	
	ξ² Ceti - - *	4	2 20 26·73			7 48	
	Moon I. U.	7·4	2 43 59·10	126·53	66·11	15 28 35·5	+755
	Moon I. L.	- -	3 9 26·43	128·10	66·53	17 53 2·9	687
	δ Arietis -	4	3 3 20·33			19 10	
	τ¹ Arietis -	5	3 12 51·39			N. 20 37	
26	δ Arietis -	4	3 3 20·32			N. 19 10	
	τ¹ Arietis -	5	3 12 51·37			20 37	
	Moon I. U.	8·4	3 35 14·63	129·98	67·02	20 3 15·8	+613
	Moon I. L.	- -	4 1 26·61	132·03	67·55	21 57 53·5	532
	δ¹ Tauri - -	4	4 14 34·68			17 12	
	ε Tauri - -	3½	4 20 9·38			N. 18 51	
27	δ¹ Tauri - -	4	4 14 34·67			N. 17 12	
	ε Tauri - -	3½	4 20 9·37			18 51	
	Moon I. U.	9·4	4 28 3·23	134·06	68·06	23 35 39·8	+444
	Moon I. L.	- -	4 55 3·25	135·89	68·51	N. 24 55 25·6	+352

te.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
55.			h m s	s	s	° ′ ″	″
27	ι Tauri - -	4½	4 54 26·20			N.21 23	
	β Tauri - -	2	5 17 8·13			28 29	
28	ι Tauri - -	4½	4 54 26·19			N.21 23	
	β Tauri - -	2	5 17 8·12			28 29	
	Moon I. U.	10·5	5 22 23·18	137·35	68·85	25 56 11·6	+255·0
	Moon I. L.	- -	5 49 57·56	138·28	69·06	26 37 12·9	154·8
	136 Tauri - -	4½	5 44 13·46			27 34	
	κ Aurigæ -	4	6 6 8·95			N.29 33	
29	136 Tauri - -	4½	5 44 13·45			N.27 34	
	κ Aurigæ -	4	6 6 8·95			29 33	
	Moon I. U.	11·5	6 17 39·25	138·55	69·09	26 58 0·5	+ 53·0
	Moon I. L.	- -	6 45 19·96	138·11	68·93	26 58 25·0	— 48·7
	ε Geminor.	3	6 35 1·39			25 16	
	ζ Geminor.	4	6 55 31·22			N.20 47	
30	ε Geminor.	3	6 35 1·39			N.25 16	
	ζ Geminor.	4	6 55 31·22			20 47	
	Moon I. U.	12·5	7 12 51·06	136·95	68·60	26 38 38·3	—148·6
	Moon I. L.	- -	7 40 4·29	135·15	68·10	25 59 13·2	244·9
	α^2 Geminor.	1½	7 25 21·53			32 12	
	β Geminor.	1½	7 36 27·21			N.28 22	
31	α^2 Geminor.	1½	7 25 21·53			N.32 12	
	β Geminor.	1½	7 36 27·22			28 22	
	Moon I. U.	13·6	8 6 52·41	132·80	67·46	25 1 1·3	—336 2
	Moon I. L.	- -	8 33 9·84	130·06	66·72	23 45 10·1	421·2
	θ Cancri -	5½	8 23 20·37			18 35	
	γ Cancri -	4½	8 34 54·35			N.21 59	
1	θ Cancri -	5½	8 23 20·38			N.18 35	
	γ Cancri -	4½	8 34 54·36			21 59	
	Moon I. U.	14·6	8 58 52·90	127·09	65·92	22 13 0·0	—499·2
	λ Leonis -	4½	9 23 27·51			23 36	
	ε Leonis -	3	9 37 37·85			N.24 [illegible]	
2	λ Leonis -	4½	9 23 27·52			N	
	ε Leonis -	3	9 37 37·85				
	Moon II. L.	- -	9 26 10·09	123·95	65·17		
	Moon II. U.	15·6	9 50 39·83	121·03	64·37		
	α Leonis *	1½	10 0 39·63				
	γ Leonis -	2	10 11 59·39				
3	α Leonis *	1½	10 0 39·64				
	γ Leonis -	2	10 11 59·41				
	Moon II. L.	- -	10 14 35·82	118·35			
	Moon II. U.	16·7	10 38 1·68	116·03			
	θ Leonis -	3	11 6 38·61				
	ι Leonis *	4	11 16 22·26				

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Feb. 4	θ Leonis -	3	11 6 38·63			N. 16 13	
	ι Leonis *	4	11 16 22·29			11 20	
	Moon II. L. - -		11 1 2·15	114·14	62·47	11 20 22·2	−773·9
	Moon II. U.	17·7	11 23 43·03	112·77	62·11	8 42 13·4	806·4
	ν Virginis *	4½	11 38 25·08			7 20	
	β Virginis -	3½	11 43 9·15			N. 2 35	
5	ν Virginis *	4½	11 38 25·10			N. 7 20	
	β Virginis -	3½	11 43 9·17			2 35	
	Moon II. L. - -		11 46 10·79	111·96	61·92	5 58 17·6	−831·8
	Moon II. U.	18·7	12 8 32·66	111·79	61·91	N. 3 9 58·8	850·3
	γ Virginis -	4	12 34 19·24			S. 0 39	
	37 Virginis -	6	12 44 14·55			N. 3 51	
6	γ Virginis -	4	12 34 19·27			S. 0 39	
	37 Virginis -	6	12 44 14·58			N. 3 51	
	Moon II. L. - -		12 30 56·46	112·29	62·08	N. 0 18 39·4	−861·8
	Moon II. U.	19·8	12 53 30·46	113·50	62·45	S. 2 34 16·0	866·2
	α Virginis -	1	13 17 33·63			S. 10 24	
	ζ Virginis -	4	13 27 18·65			N. 0 9	
7	α Virginis -	1	13 17 33·65			S. 10 24	
	ζ Virginis -	4	13 27 18·68			N. 0 9	
	Moon II. L. - -		13 16 23·51	115·47	63·04	S. 5 27 19·7	−863·1
	Moon II. U.	20·8	13 39 44·80	118·22	63·83	8 18 56·9	851·7
	κ Virginis -	4	14 5 9·89			9 36	
	λ Virginis -	4	14 11 16·04			S. 12 42	
8	κ Virginis -	4	14 5 9·92			S. 9 36	
	λ Virginis -	4	14 11 16·07			12 42	
	Moon II. L. - -		14 3 43·90	121·77	64·83	11 7 24·3	−831·3
	Moon II. U.	21·8	14 28 30·53	126·14	66·04	13 50 45·5	800·5
	α^2 Libræ - -	2½	14 42 51·48			15 26	
	ν^1 Libræ - -	5	14 58 32·45			S. 15 41	
9	α^2 Libræ - -	2½	14 42 51·52			S. 15 26	
	ν^1 Libræ - -	5	14 58 32·48			15 41	
	Moon II. L. - -		14 54 14·29	131·28	67·43	16 26 48·0	−757·9
	Moon II. U.	22·9	15 21 4·13	137·14	68·98	18 53 0·2	701·8
	δ Scorpii -	3	15 51 45·25			22 12	
	β^1 Scorpii -	2	15 56 59·93			S. 19 24	
10	δ Scorpii -	3	15 51 45·28			S. 22 12	
	β^1 Scorpii -	2	15 56 59·96			19 24	
	Moon II. L. - -		15 49 7·68	143·54	70·62	21 6 30·5	−630·6
	Moon II. U.	23·9	16 18 30·14	150·24	72·30	23 4 7·6	−542·7
	A Ophiuchi-	4½	17 6 25·02			26 23	
	ξ Ophiuchi-	4½	17 12 17·91			S. 20 57	
11	A Ophiuchi-	4½	17 6 25·05			S. 26 23	

te.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ℂ's R.A. in 1 hour of Long.	Sidereal Time of ℂ's Sem. pas. mer.	Declination.	Var. of ℂ's Dec. in 1 hour of Long.
55.			h m s	s	s	° ′ ″	″
11	ξ Ophiuchi -	4½	17 12 17·94			S. 20 57	
	Moon II. L. - -		16 49 13·18	156·90	73·93	24 42 25·0	— 437·2
	Moon II. U.	24·9	17 21 13·52	163·04	75·40	25 57 50·4	314·1
	μ' Sagittarii	4	18 5 4·18			21 6	
	δ Sagittarii	3½	18 11 41·22			S. 29 53	
12	Moon II. L. - -		17 54 22·02	168·16	76·61	S. 26 47 0·5	— 175·0
	Moon II. U.	26·0	18 28 23·29	171·75	77·43	27 7 1·5	— 23·3
13	Moon II. L. - -		19 2 56·74	173·47	77·80	S. 26 55 50·4	+ 136·0
	Moon II. U.	27·0	19 37 38·55	173·15	77·69	26 12 33·8	296·4
14	Moon II. L. - -		20 12 4·69	170·90	77·13	S. 24 57 39·7	+ 451·0
	Moon II. U.	28·1	20 45 54·03	167·09	76·19	23 12 56·0	593·7
15	Moon II. L. - -		21 18 50·58	162·20	75·00	S. 21 1 18·7	+ 719·2
	Moon II. U.	29·1	21 50 44·51	156·75	73·66	18 26 35·6	824·3
16	Moon I. L. - -		22 19 7·52	151·44	72·28	S. 15 33 3·2	+ 907·3
17	Moon I. U.	0·7	22 48 52·72	146·18	70·97	S. 12 25 8·5	+ 968·1
	Moon I. L. - -		23 17 37·90	141·46	69·79	9 7 14·9	1007·4
18	Moon I. U.	1·7	23 45 30·56	137·45	68·78	S. 5 43 29·7	+1027·0
	Moon I. L. - -		0 12 39·81	134·23	67·97	S. 2 17 39·6	1028·6
19	Moon I. U.	2·8	0 39 15·40	131·84	67·38	N. 1 6 52·3	+1014·3
	Moon I. L. - -		1 5 27·11	130·25	66·99	4 27 7·5	986·0
20	Moon I. U.	3·8	1 31 24·34	129·42	66·80	N. 7 40 28·0	+ 945·5
	Moon I. L. - -		1 57 15·84	129·28	66·80	10 44 36·2	894·2
	ξ¹ Ceti - - *	5	2 5 18·12			8 10	
	ξ Arietis *	5½	2 17 2·10			N. 9 57	
21	ξ¹ Ceti - - *	5	2 5 18·11			N. 8 10	
	ξ Arietis *	5½	2 17 2·08			9 57	
	Moon I. U.	4·9	2 23 9·40	129·74	66·96	13 37	·5
	Moon I. L. - -		2 49 11·64	130·70	67·25	16 17	·3
	δ Arietis -	4	3 3 19·92			19	
	ζ Arietis -	5	3 6 33·62			N.	
22	δ Arietis -	4	3 3 19·91				
	ζ Arietis -	5	3 6 33·60				
	Moon I. U.	5·9	3 15 27·82	132·04	67·6		
	Moon I. L. - -		3 42 1·56	133·61	68·0		
	η Tauri - -	3	3 38 51·72				
	A¹ Tauri - -	5	3 56 7·25				
23	η Tauri - -	3	3 38 51·70				
	A¹ Tauri - -	5	3 56 7·23				

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of L.
1855.			h m s	s	s	° ′ ″	
Feb. 23	Moon I. U.	6·9	4 8 54·65	135·24	68·50	N.22 44 0·2	+51
	Moon I. L.	- -	4 36 6·91	136·77	68·91	24 17 33·1	42
	ε Tauri - -	3½	4 20 8·97			18 51	
	α Tauri - -	1	4 27 36·04			N.16 13	
24	ε Tauri - -	3½	4 20 8·96			N.18 51	
	α Tauri - -	1	4 27 36·03			16 13	
	Moon I. U.	8·0	5 3 36·11	138·04	69·23	25 31 45·1	+32
	Moon I. L.	- -	5 31 18·09	138·88	69·44	26 25 54·0	21
	β Tauri - -	2	5 17 7·76			28 29	
	ζ Tauri - -	3½	5 28 59·02			N.21 3	
25	β Tauri - -	2	5 17 7·74			N.28 29	
	ζ Tauri - -	3½	5 28 59·01			21 3	
	Moon I. U.	9·0	5 59 6·98	139·17	69·50	26 59 32·7	+11
	Moon I. L.	- -	6 26 55·72	138·84	69·38	27 12 31·0	+ 1
	ν Geminor.	4	6 20 21·60			20 18	
	ε Geminor.	3	6 35 1·16			N.25 16	
26	ν Geminor.	4	6 20 21·58			N.20 18	
	ε Geminor.	3	6 35 1·15			25 16	
	Moon I. U.	10·0	6 54 36·64	137·87	69·10	27 4 56·6	− 8
	Moon I. L.	- -	7 22 2·11	136·28	68·66	26 37 15·9	18
	α^2 Geminor.	1½	7 25 21·39			32 12	
	β Geminor.	1½	7 36 27·12			N.28 22	
27	α^2 Geminor.	1½	7 25 21·38			N.32 12	
	β Geminor.	1½	7 36 27·11			28 22	
	Moon I. U.	11·1	7 49 5·26	134·16	68·06	25 50 12·5	−28
	Moon I. L.	- -	8 15 40·43	131·64	67·36	24 44 44·5	37
	ψ^2 Cancri -	4	8 1 43·79			25 57	
	γ Cancri -	4½	8 34 54·40			N.21 59	
28	ψ^2 Cancri -	4	8 1 43·78			N.25 57	
	γ Cancri -	4½	8 34 54·39			21 59	
	Moon I. U.	12·1	8 41 43·60	128·85	66·58	23 22 2·7	−45
	Moon I. L.	- -	9 7 12·46	125·95	65·77	21 43 26·1	53
	ξ Cancri -	5½	9 1 2·11			22 38	
	λ Leonis -	4½	9 23 27·67			N.23 36	
Mar. 1	ξ Cancri -	5½	9 1 2·10			N.22 38	
	λ Leonis -	4½	9 23 27·67			23 36	
	Moon I. U.	13·2	9 32 6·62	123·09	64·96	19 50 20·7	−59
	Moon I. L.	- -	9 56 27·22	120·38	64·19	17 44 15·9	66
	34 Leonis -	6	10 3 51·41			14 4	
	γ Leonis -	2	10 11 59·67			N.20 34	
2	34 Leonis -	6	10 3 51·42			N.14 4	
	γ Leonis -	2	10 11 59·68			20 34	
	Moon I. U.	14·2	10 20 16·89	117·95	63·50	N.15 26 42·0	−71

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Mar. 2	Moon I. L.	- -	10 43 39·50	115·89	62·91	N. 12 59 10·9	−760·0
	l Leonis *	6	10 41 39·03			11 19	
	χ Leonis *	4½	10 57 33·26			N. 8 7	
3	*l* Leonis *	6	10 41 39·03			N. 11 19	
	χ Leonis *	4½	10 57 33·27			8 7	
	Moon II. U.	15·2	11 8 44·82	114·20	62·45	10 23 13·1	−798·4
	ι Leonis *	4	11 16 22·70			11 20	
	τ Leonis -	4	11 20 29·86			N. 3 39	
4	ι Leonis *	4	11 16 22·71			N. 11 20	
	τ Leonis -	4	11 20 29·87			3 39	
	Moon II. L.	- -	11 31 28·08	113·10	62·14	7 40 19·0	−829·3
	Moon II. U.	16·3	11 54 1·47	112·56	61·99	4 52 0·4	852·6
	10 Virginis -	6	12 2 16·52			2 43	
	η Virginis -	3½	12 12 30·24			N. 0 8	
5	10 Virginis -	6	12 2 16·53			N. 2 43	
	η Virginis -	3½	12 12 30·25			0 8	
	Moon II. L.	- -	12 16 31·92	112·62	62·02	N. 1 59 46·4	−868·4
	Moon II. U.	17·3	12 39 6·81	113·30	62·24	S. 0 54 49·9	876·4
	θ Virginis -	4½	13 2 27·60			4 46	
	α Virginis -	1	13 17 34·28			S. 10 24	
6	θ Virginis -	4½	13 2 27·62			S. 4 46	
	α Virginis -	1	13 17 34·30			10 24	
	Moon II. L.	- -	13 1 53·92	114·66	62·65	3 50 13·6	−876·2
	Moon II. U.	18·4	13 25 1·40	116·70	63·25	6 44 44·8	867·5
	94 Virginis -	6	13 58 38·07			8 12	
	κ Virginis -	4	14 5 10·64			S. 9 36	
7	94 Virginis -	6	13 58 38·09			S. 8 12	
	κ Virginis -	4	14 5 10·66			9 36	
	Moon II. L.	- -	13 48 37·59	119·45	64·05	9 36 37·4	−849·7
	Moon II. U.	19·4	14 12 51·06	122·91	65·03	12 23 56·7	821·9
	5 Libræ - -	6	14 37 58·90			14 51	
	α^2 Libræ - -	2½	14 42 52·29			S. 15 26	
8	5 Libræ - -	6	14 37 58·93			S. 14 51	
	α^2 Libræ - -	2½	14 42 52·31			15 26	
	Moon II. L.	- -	14 37 50·24	127·07	66·19	15 4 38·9	−
	Moon II. U.	20·4	15 3 43·16	131·86	67·50	17 36 26·8	
	η Libræ - -	4½	15 35 55·60			15 12	
	λ Libræ - -	4	15 44 55·71			S. 19 44	
9	η Libræ - -	4½	15 35 55·63			S. 15 12	
	λ Libræ - -	4	15 44 55·75			19 44	
	Moon II. L.	- -	15 30 36·91	137·18	68·94	19 56 50	
	Moon II. U.	21·5	15 58 36·97	142·88	70·44	22 3 5	
	α Scorpii -	1½	16 20 31·41			S. 26 6	

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1855.			h m s	s	s	° ′ ″	″
Mar. 9	τ Scorpii -	3½	16 26 51·75			S. 27 55	
10	α Scorpii -	1½	16 20 31·44			S. 26 6	
	τ Scorpii -	3½	16 26 51·79			27 55	
	Moon II. L. - -		16 27 46·46	148·70	71·94	23 52 18·3	— 498
	Moon II. U.	22·5	16 58 4·95	154·32	73·36	25 21 28·3	390
	θ Ophiuchi	3½	17 13 6·27			24 51	
	d Ophiuchi	4	17 18 5·62			S. 29 44	
11	θ Ophiuchi	3½	17 13 6·30			S. 24 51	
	d Ophiuchi	4	17 18 5·66			29 44	
	Moon II. L. - -		17 29 27·79	159·36	74·61	26 27 37 6	— 268
	Moon II. U.	23·5	18 1 45·61	163·41	75·60	27 8 3·6	— 133
	σ Sagittarii	3	18 46 15·80			26 28	
	ζ Sagittarii	3½	18 53 22·24			S. 30 5	
12	σ Sagittarii	3	18 46 15·83			S. 26 28	
	ζ Sagittarii	3½	18 53 22·28			30 5	
	Moon II. L. - -		18 34 44·28	166·11	76·25	27 20 32·9	+ 10
	Moon II. U.	24·5	19 8 6·14	167·24	76·51	27 3 36·4	159
	A Sagittarii	5½	19 50 5·81			26 35	
	c Sagittarii	4½	19 53 43·20			S. 28 6	
13	A Sagittarii	5½	19 50 5·84			S. 26 35	
	c Sagittarii	4½	19 53 43·23			28 6	
	Moon II. L. - -		19 41 31·68	166·73	76·38	26 16 41·9	+ 309
	Moon II. U.	25·6	20 14 41·83	164·72	75·87	S. 25 0 19·0	453
14	Moon II. L. - -		20 47 20·15	161·50	75·06	S. 23 15 58·2	+ 587
	Moon II. U.	26·6	21 19 14·38	157·45	74·05	21 6 4·2	708
15	Moon II. L. - -		21 50 17·17	152·99	72·91	S. 18 33 42·5	+ 812
	Moon II. U.	27·6	22 20 25·92	148·50	71·77	15 42 27·6	897
16	Moon II. L. - -		22 49 42·08	144·27	70·66	S. 12 36 9·4	+ 962
	Moon II. U.	28·7	23 18 10·30	140·53	69·69	9 18 42·9	1008
17	Moon II. L. - -		23 45 57·37	137·43	68·87	S. 5 54 0·6	+1035
18	Moon I. U.	0·3	0 10 54·93	135·13	68·23	S. 2 25 46·3	+1044
	Moon I. L. - -		0 37 45·50	133·43	67·80	N. 1 2 29·1	1035
19	Moon I. U.	1·3	1 4 20·12	132·46	67·55	N. 4 27 29·5	+1011
	Moon I. L. - -		1 30 47·29	132·18	67·50	7 46 14·6	973
20	Moon I. U.	2·4	1 57 14·83	132·51	67·61	N. 10 56 0·4	+ 922
	Moon I. L. - -		2 23 49·54	133·36	67·87	13 54 19·1	859
21	Moon I. U.	3·4	2 50 36·98	134·61	68·23	N. 16 38 58·3	+ 785
	Moon I. L. - -		3 17 41·14	136·12	68·66	N. 19 8 0·2	+ 703

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1855.			h m s	s	s	° ′ ″	″
Mar. 22	9 Tauri - -	6	3 28 25·64			N.22 44	
	17 Tauri - -	4½	3 36 15·40			23 39	
	Moon I. U.	4·5	3 45 4·22	137·73	69·11	21 19 43·1	+612·7
	Moon I. L.	- -	4 12 46·38	139·27	69·55	23 12 39·6	515·7
	ε Tauri - -	3½	4 20 8·53			18 51	
	α Tauri - -	1	4 27 35·60			N.16 13	
23	ε Tauri - -	3½	4 20 8·51			N.18 51	
	α Tauri - -	1	4 27 35·59			16 13	
	Moon I. U.	5·5	4 40 45·69	140·56	69·91	24 45 39·4	+413·5
	Moon I. L.	- -	5 8 58·09	141·43	70·16	25 57 49·7	307·7
	β Tauri - -	2	5 17 7·27			28 29	
	ζ Tauri - -	3½	5 28 58·55			N.21 3	
24	β Tauri - -	2	5 17 7·25			N.28 29	
	ζ Tauri - -	3½	5 28 58·54			21 3	
	Moon I. U.	6·5	5 37 17·82	141·75	70·26	26 48 36·5	+199·9
	Moon I. L.	- -	6 5 37·64	141·44	70·19	27 17 46·7	+ 91·9
	μ Geminor.	3	6 14 11·21			22 35	
	ν Geminor.	4	6 20 21·16			N.20 18	
25	μ Geminor.	3	6 14 11·20			N.22 35	
	ν Geminor.	4	6 20 21·14			20 18	
	Moon I. U.	7·6	6 33 49·66	140·45	69·94	27 25 27·1	− 14·8
	Moon I. L.	- -	7 1 45·92	138·82	69·51	27 12 3·9	118·5
	δ Geminor.	3½	7 11 27·91			22 15	
	ι Geminor.	4	7 16 43·35			N.28 5	
26	δ Geminor.	3½	7 11 27·89			N.22 15	
	ι Geminor.	4	7 16 43·33			28 5	
	Moon I. U.	8·6	7 29 19·14	136·63	68·93	26 38 21·2	−217·8
	Moon I. L.	- -	7 56 23·31	134·00	68·23	25 45 18·2	311·7
	β Geminor.	1½	7 36 26·71			28 22	
	ψ² Cancri -	4	8 1 43·45			N.25 57	
27	β Geminor.	1½	7 36 26·69			N.28 22	
	ψ² Cancri -	4	8 1 43·43			25 57	
	Moon I. U.	9·6	8 22 54·03	131·09	67·[illegible]	24 34 4·9	−399·4
	Moon I. L.	- -	8 48 48·83	128·04	66	23 5 59·6	480·3
	γ Cancri -	4½	8 34 54·11			21 59	
	ρ³ Cancri -	6	8 46 58·91			28 29	
28	γ Cancri -	4½	8 34 54·10			21 59	
	ρ³ Cancri -	6	8 46 58·89			28 29	
	Moon I. U.	10·7	9 14 7·03	125·01		22 25·4	− 2
	Moon I. L.	- -	9 38 49·68	122·[illegible]		24 47·6	− 9
	λ Leonis -	4½	9 23 27·49			36	
	ε Leonis -	3	9 37 37·92			26	
29	λ Leonis -	4½	9 23 27·48			36	

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1855.			h m s	s	s	° ′ ″	″
Mar. 29	ε Leonis -	3	9 37 37·91			N.24 26	
	Moon I. U.	11·7	10 2 59·35	119·53	64·16	17 14 32·4	−680
	Moon I. L.	- -	10 26 39·89	117·29	63·50	14 53 6·2	732
	γ Leonis -	2	10 11 59·61			20 34	
	ρ Leonis *	4	10 25 11·57			N.10 3	
30	γ Leonis -	2	10 11 59·60			N.20 34	
	ρ Leonis *	4	10 25 11·57			10 3	
	Moon I. U.	12·7	10 49 56·09	115·49	62·96	12 21 54·1	−778
	Moon I. L.	- -	11 12 53·62	114·19	62·56	9 42 21·9	816
	σ Leonis *	4	11 13 40·70			6 49	
	τ Leonis -	4	11 20 29·96			N. 3 39	
31	σ Leonis *	4	11 13 40·70			N. 6 49	
	τ Leonis -	4	11 20 29·96			3 39	
	Moon I. U.	13·8	11 35 38·75	113·43	62·32	6 55 56·5	−846
	Moon I. L.	- -	11 58 18·25	113·25	62·24	4 4 5·3	870
	β Virginis -	3½	11 43 9·79			2 35	
	o Virginis *	4½	11 57 50·67			N. 9 32	
Apr. 1	β Virginis -	3½	11 43 9·79			N. 2 35	
	o Virginis *	4½	11 57 50·67			9 32	
	Moon I. U.	14·8	12 20 59·35	113·70	62·35	N. 1 8 21·0	−885
	γ Virginis -	4	12 34 20·13			S. 0 39	
	δ Virginis *	3	12 48 19·29			N. 4 11	
2	γ Virginis -	4	12 34 20·13			S. 0 39	
	δ Virginis *	3	12 48 19·30			N. 4 11	
	Moon II. L.	- -	12 45 54·91	114·85	62·65	S. 1 49 40·0	−893
	Moon II. U.	15·8	13 9 3·11	116·63	63·15	4 48 14·7	891
	α Virginis -	1	13 17 34·70			S. 10 24	
	ζ Virginis -	4	13 27 19·76			N. 0 9	
3	α Virginis -	1	13 17 34·71			S. 10 24	
	ζ Virginis -	4	13 27 19·77			N. 0 9	
	Moon II. L.	- -	13 32 36·74	119·09	63·83	S. 7 45 33·0	−880
	Moon II. U.	16·8	13 56 43·90	122·22	64·71	10 39 34·3	858
	κ Virginis -	4	14 5 11·17			9 36	
	λ Virginis -	4	14 11 17·35			S. 12 42	
4	κ Virginis -	4	14 5 11·18			S. 9 36	
	λ Virginis -	4	14 11 17·37			12 42	
	Moon II. L.	- -	14 21 32·57	126·00	65·75	13 28 8·2	−825
	Moon II. U.	17·9	14 47 10·33	130·39	66·95	16 8 52·8	780
	20 Libræ - -	3½	14 55 36·68			24 43	
	ζ¹ Libræ - -	4	15 20 6·17			S. 16 12	
5	20 Libræ - -	3½	14 55 36·70			S. 24 43	
	ζ¹ Libræ - -	4	15 20 6·19			16 12	
	Moon II. L.	- -	15 13 43·84	135·28	68·27	S. 18 39 14·4	−721

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1855.			h m s	s	s	° ′ ″	″
Apr. 5	Moon II. U.	18·9	15 41 18·35	140·52	69·66	S. 20 56 28·1	−648·6
	α Scorpii -	1½	16 20 32·24			26 6	
	τ Scorpii -	3½	16 26 52·61			S. 27 55	
6	α Scorpii -	1½	16 20 32·27			S. 26 6	
	τ Scorpii -	3½	16 26 52·64			27 55	
	Moon II. L.	- -	16 9 56·86	145·90	71·08	22 57 41·6	−561·2
	Moon II. U.	19·9	16 39 39·33	151·13	72·43	24 39 59·3	459·3
	A Ophiuchi	4½	17 6 26·87			26 23	
	ξ Ophiuchi	4½	17 12 19·69			S. 20 57	
7	A Ophiuchi	4½	17 6 26·90			S. 26 23	
	ξ Ophiuchi	4½	17 12 19·72			20 57	
	Moon II. L.	- -	17 10 21·97	155·86	73·65	26 0 30·1	−343·6
	Moon II. U.	21·0	17 41 56·63	159·74	74·64	26 56 37·3	215·8
	μ^1 Sagittarii	4	18 5 5·94			21 6	
	δ Sagittarii	3½	18 11 43·11			S. 29 53	
8	μ^1 Sagittarii	4	18 5 5·97			S. 21 6	
	δ Sagittarii	3½	18 11 43·15			29 53	
	Moon II. L.	- -	18 14 10·99	162·43	75·33	27 26 12·2	− 78·8
	Moon II. U.	22·0	18 46 49·34	163·70	75·67	27 27 45·4	+ 63·8
	ζ Sagittarii	3½	18 53 23·22			30 5	
	τ Sagittarii	4	18 57 53·31			S. 27 53	
9	ζ Sagittarii	3½	18 53 23·25			S. 30 5	
	τ Sagittarii	4	18 57 53·35			27 53	
	Moon II. L.	- -	19 19 33·92	163·47	75·63	27 0 35·2	+207·7
	Moon II. U.	23·1	19 52 7·10	161·83	75·25	26 4 54·0	348·3
	ρ Capricorni	5	20 20 34·88			18 17	
	ψ Capricorni	4½	20 37 29·93			S. 25 47	
10	ρ Capricorni	5	20 20 34·91			S. 18 17	
	ψ Capricorni	4½	20 37 29·97			25 47	
	Moon II. L.	- -	20 24 13·15	159·01	74·57	24 41 46·5	+481·4
	Moon II. U.	24·1	20 55 39·91	155·34	73·67	22 53 3·6	603·7
	γ Capricorni	4	21 32 2·61			17 19	
	δ Capricorni	3½	21 39 1·40			S. 16 47	
11	γ Capricorni	4	21 32 2·64			S. 17	
	δ Capricorni	3½	21 39 1·42				
	Moon II. L.	- -	21 26 19·49	151·21	72·63		
	Moon II. U.	25·1	21 56 8·50	146·97	71·54		
	τ^3 Aquarii -	5½	22 41 53·87				
	δ Aquarii -	3	22 46 56·14			S	
12	Moon II. L.	- -	22 25 7·44	142·91	70·49		
	Moon II. U.	26·2	22 53 20·07	139·28	69·53		
13	Moon II. L.	- -	23 20 52·45	136·23	68·7[illegible]		

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1855.			h m s	s	s	° ′ ″	″
Apr. 13	Moon II. U.	27·2	23 47 52·16	133·85	68·05	S. 5 42 15·3	+1016·9
14	Moon II. L.	- -	0 14 27·72	132·20	67·58	S. 2 17 25·0	+1028·9
	Moon II. U.	28·3	0 40 47·96	131·30	67·32	N. 1 8 15·3	1025·3
15	Moon II. L.	- -	1 7 1·68	131·10	67·25	N. 4 31 42·5	+1006·8
	Moon II. U.	29·3	1 33 17·14	131·58	67·36	7 49 59·7	973·8
16	Moon I. L.	- -	1 57 26·67	132·59	67·64	N. 11 0 18·1	+ 927·1
17	Moon I. U.	0·9	2 24 6·44	134·11	68·04	N. 13 59 58·1	+ 867·5
	Moon I. L.	- -	2 51 6·80	136·00	68·55	16 46 29·4	795·8
18	Moon I. U.	1·9	3 18 31·04	138·07	69·11	N. 19 17 34·3	+ 713·3
	Moon I. L.	- -	3 46 20·38	140·14	69·67	21 31 9·2	621·1
19	Moon I. U.	3·0	4 14 33·63	142·02	70·18	N. 23 25 27·9	+ 520·8
	Moon I. L.	- -	4 43 7·18	143·49	70·58	24 59 3·5	414·3
20	ι Tauri - -	4½	4 54 24·99			N. 21 23	
	l Tauri - -	5½	4 59 12·84			20 13	
	Moon I. U.	4·0	5 11 55·13	144·38	70·84	26 10 53·7	+ 303·5
	Moon I. L.	- -	5 40 49·54	144·55	70·92	27 0 19·6	190·7
	ζ Tauri - -	3½	5 28 58·15			21 3	
	136 Tauri - -	4½	5 44 12·20			N. 27 34	
21	ζ Tauri - -	3½	5 28 58·14			N. 21 3	
	136 Tauri - -	4½	5 44 12·19			27 34	
	Moon I. U.	5·1	6 9 41·31	143·94	70·79	27 27 10·9	+ 78·1
	Moon I. L.	- -	6 38 20·93	142·53	70·46	27 31 42·2	— 32·3
	ε Geminor.	3	6 35 0·24			25 16	
	ζ Geminor.	4	6 55 30·17			N. 20 47	
22	ε Geminor.	3	6 35 0·23			N. 25 16	
	ζ Geminor.	4	6 55 30·15			20 47	
	Moon I. U.	6·1	7 6 39·06	140·38	69·93	27 14 32·8	— 138·5
	Moon I. L.	- -	7 34 27·84	137·66	69·24	26 36 41·4	239·1
	α^2 Geminor.	1½	7 25 20·46			32 12	
	β Geminor.	1½	7 36 26·24			N. 28 22	
23	α^2 Geminor.	1½	7 25 20·45			N. 32 12	
	β Geminor.	1½	7 36 26·23			28 22	
	Moon I. U.	7·1	8 1 41·24	134·52	68·43	25 39 21·9	— 333·0
	Moon I. L.	- -	8 28 15·26	131·13	67·54	24 23 58·7	419·6
	θ Cancri -	5½	8 23 19·68			18 35	
	γ Cancri -	4½	8 34 53·71			N. 21 59	
24	θ Cancri -	5½	8 23 19·66			N. 18 35	
	γ Cancri -	4½	8 34 53·69			21 59	
	Moon I. U.	8·2	8 54 8·23	127·70	66·62	N. 22 52 1·1	— 498·7

ate.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
355.			h m s	s	s	° ′ ″	″
r. 24	Moon I. L.	- -	9 19 20·59	124·39	65·71	N.21 5 0·2	−570·2
	λ Leonis -	4½	9 23 27·13			23 36	
	9 Leonis -	6	9 29 32·34			N.25 19	
25	λ Leonis -	4½	9 23 27·12			N.23 36	
	9 Leonis -	6	9 29 32·33			25 19	
	Moon I. U.	9·2	9 43 54·57	121·33	64·86	19 4 25·7	−634·4
	Moon I. L.	- -	10 7 53·92	118·63	64·09	16 51 44·2	691·4
	α Leonis *	1½	10 0 39·50			12 40	
	γ Leonis -	2	10 11 59·33			N.20 34	
26	α Leonis *	1½	10 0 39·49			N.12 40	
	γ Leonis -	2	10 11 59·32			20 34	
	Moon I. U.	10·2	10 31 23·63	116·40	63·44	14 28 19·3	−741·6
	Moon I. L.	- -	10 54 29·63	114·69	62·93	11 55 32·3	785·2
	χ Leonis *	4½	10 57 33·14			8 7	
	θ Leonis -	3	11 6 38·94			N.16 13	
27	χ Leonis *	4½	10 57 33·13			N. 8 7	
	θ Leonis -	3	11 6 38·93			16 13	
	Moon I. U.	11·3	11 17 18·50	113·56	62·58	9 14 42·0	−822·2
	Moon I. L.	- -	11 39 57·51	113·05	62·40	6 27 7·5	852·5
	ν Virginis *	4½	11 38 25·62			7 20	
	β Virginis -	3½	11 43 9·72			N. 2 35	
28	ν Virginis *	4½	11 38 25·61			N. 7 20	
	β Virginis -	3½	11 43 9·71			2 35	
	Moon I. U.	12·3	12 2 34·22	113·18	62·40	3 34 10·3	−875·9
	Moon I. L.	- -	12 25 16·64	114·00	62·60	0 37 15·9	891·9
	η Virginis -	3½	12 12 30·47			N. 0 8	
	γ Virginis -	4	12 34 20·17			S. 0 39	
29	η Virginis -	3½	12 12 30·47			N. 0 8	
	γ Virginis -	4	12 34 20·17			S. 0 39	
	Moon I. U.	13·3	12 48 13·11	115·53	62·99	2 22 3·0	−899·9
	Moon I. L.	- -	13 11 32·10	117·76	63·59	5 22 5·0	898·9
	θ Virginis -	4½	13 2 28·09			4 46	
	α Virginis -	1	13 17 34·85			S.10 24	
30	θ Virginis -	4½	13 2 28·09			S. 4 46	
	α Virginis -	1	13 17 34·86			10 24	
	Moon I. U.	14·4	13 35 22·36	120·73	64·39	8 [illegible]	
	Moon I. L.	- -	13 59 52·57	124·42	65·38	11	
	κ Virginis -	4	14 5 11·45			9	
	λ Virginis -	4	14 11 17·66			S.12	
y 1	κ Virginis -	4	14 5 11·46			S. 9	
	λ Virginis -	4	14 11 17·66			12	
	Moon I. U.	15·4	14 25 11·07	128·78	66·53	14	
	α^2 Libræ - -	2½	14 42 53·30			S.15	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var ☾'s D in 1 h of L
1855.			h m s	s	s	° ′ ″	
May 1	20 Libræ - -	3½	14 55 37·13			S. 24 43	
2	α^2 Libræ - -	2½	14 42 53·31			S. 15 26	
	20 Libræ - -	3½	14 55 37·14			24 43	
	Moon II. L. - -		14 53 41·31	133·97	67·85	16 48 8·0	−78
	Moon II. U.	16·5	15 21 1·19	139·41	69·26	19 18 36·0	71
	δ Scorpii -	3	15 51 47·52			22 12	
	β^1 Scorpii -	2	15 57 2·18			S. 19 24	
3	δ Scorpii -	3	15 51 47·54			S. 22 12	
	β^1 Scorpii -	2	15 57 2·19			19 24	
	Moon II. L. - -		15 49 28·04	145·09	70·73	21 34 46·4	−63
	Moon II. U.	17·5	16 19 3·11	150·73	72·17	23 33 24·3	54
	A Ophiuchi	4½	17 6 27·64			26 23	
	θ Ophiuchi	3½	17 13 7·92			S. 24 51	
4	A Ophiuchi	4½	17 6 27·67			S. 26 23	
	θ Ophiuchi	3½	17 13 7·95			24 51	
	Moon II. L. - -		16 49 43·77	155·95	73·49	25 11 16·6	−43
	Moon II. U.	18·5	17 21 22·66	160·36	74·60	26 25 22·4	30
	μ^1 Sagittarii	4	18 5 6·76			21 6	
	δ Sagittarii	3½	18 11 44·01			S. 29 53	
5	μ^1 Sagittarii	4	18 5 6·79			S. 21 6	
	δ Sagittarii	3½	18 11 44·04			29 53	
	Moon II. L. - -		17 53 47·54	163·55	75·42	27 13 7·5	−16
	Moon II. U.	19·6	18 26 41·99	165·24	75·87	27 32 40·0	− 2
	σ Sagittarii	3	18 46 17·65			26 28	
	ζ Sagittarii	3½	18 53 24·16			S. 30 5	
6	σ Sagittarii	3	18 46 17·68			S. 26 28	
	ζ Sagittarii	3½	18 53 24·19			30 5	
	Moon II. L. - -		18 59 46·75	165·26	75·92	27 23 0·1	+12
	Moon II. U.	20·6	19 32 41·94	163·67	75·58	26 44 8·8	26
	b Sagittarii	5	19 48 3·55			27 33	
	c Sagittarii	4½	19 53 45·05			S. 28 6	
7	b Sagittarii	5	19 48 3·58			S. 27 33	
	c Sagittarii	4½	19 53 45·09			28 6	
	Moon II. L. - -		20 5 9·41	160·70	74·89	25 37 5·1	+40
	Moon II. U.	21·6	20 36 54·60	156·70	73·94	24 3 39·2	52
	ι Capricorni	5	21 14 10·42			17 27	
	ζ Capricorni	4	21 18 23·32			S. 23 2	
8	ι Capricorni	5	21 14 10·46			S. 17 27	
	ζ Capricorni	4	21 18 23·35			23 2	
	Moon II. L. - -		21 7 47·75	152·10	72·82	22 6 19·7	+64
	Moon II. U.	22·7	21 37 44·10	147·30	71·63	19 47 59·6	+73
	μ Capricorni	5	21 45 23·43			14 14	
	ι Aquarii -	4½	21 58 36·21			S. 14 34	

Date.	Name.	Magnitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
May 9	μ Capricorni	5	21 45 23·47			S. 14 14	
	ι Aquarii -	4½	21 58 36·24			14 34	
	Moon II. L. - -		22 6 43·37	142·64	70·46	17 11 45·4	+ 820·7
	Moon II. U.	23·7	22 34 49·01	138·40	69·35	14 20 46·2	886·6
	τ^3 Aquarii -	5½	22 41 54·61			14 21	
	δ Aquarii -	3	22 46 56·88			S. 16 35	
10	τ^3 Aquarii -	5½	22 41 54·64			S. 14 21	
	δ Aquarii -	3	22 46 56·91			16 35	
	Moon II. L. - -		23 2 7·23	134·75	68·39	11 18 8·1	+ 937·2
	Moon II. U.	24·7	23 28 45·94	131·83	67·60	8 6 52·1	973·0
	30 Piscium -	4½	23 54 30·95			6 49	
	33 Piscium -	5	23 57 54·32			S. 6 31	
11	30 Piscium -	4½	23 54 30·97			S. 6 49	
	33 Piscium -	5	23 57 54·35			6 31	
	Moon II. L. - -		23 54 54·25	129·69	67·01	4 49 52·0	+ 994·7
	Moon II. U.	25·8	0 20 41·63	128·35	66·63	S. 1 29 54·9	1002·6
	ε Piscium *	4	0 55 24·56			N. 7 6	
	e Piscium *	5	1 0 53·41			N. 4 53	
12	ε Piscium *	4	0 55 24·59			N. 7 6	
	e Piscium *	5	1 0 53·44			4 53	
	Moon II. L. - -		0 46 17·75	127·80	66·45	1 50 17·2	+ 997·2
	Moon II. U.	26·8	1 11 51·98	128·03	66·48	N. 5 8 5·7	978·8
13	Moon II. L. - -		1 37 33·12	128·95	66·70	N. 8 20 56·3	+ 947·5
	Moon II. U.	27·8	2 3 29·16	130·49	67·09	11 26 16·0	903·7
14	Moon II. L. - -		2 29 46·89	132·54	67·61	N. 14 21 35·0	+ 847·5
	Moon II. U.	28·9	2 56 31·57	134·96	68·23	17 4 27·5	779·3
15	Moon II. L. - -		3 23 46·60	137·56	68·90	N. 19 32 32·7	+ 699·7
16	Moon I. U.	0·4	3 49 13·87	140·04	69·57	N. 21 43 39·9	+ 609·8
	Moon I. L. - -		4 17 28·79	142·39	70·18	23 35 51·3	510·7
17	Moon I. U.	1·4	4 46 9·31	144·27	70·66	N. 25 7 27	
	Moon I. L. - -		5 15 8·44	145·46	70·98	26 17 1[illegible]	
18	Moon I. U.	2·5	5 44 16·97	145·81	71·10	N. 27 4	
	Moon I. L. - -		6 13 24·17	145·23	70·98	27 28	
19	Moon I. U.	3·5	6 42 18·86	143·73	70·63	N. 27 [illegible]	
	Moon I. L. - -		7 10 50·40	141·40	70·06	27 [illegible]	
20	δ Geminor.	3½	7 11 27·16			N. 22 [illegible]	
	ι Geminor.	4	7 16 42·54			28	
	Moon I. U.	4·5	7 38 49·76	138·40	69·32	26	
	Moon I. L. - -		8 6 10·09	134·93	68·44	N. 25	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
May 20	φ Geminor.	5	7 44 36·77			N.27 8	
	ψ[5] Cancri -	4	8 1 42·64			25 57	
21	φ Geminor.	5	7 44 36·76			N.27 8	
	ψ[5] Cancri -	4	8 1 42·63			25 57	
	Moon I. U.	5·6	8 32 47·13	131·22	67·49	24 7 58·8	—436·9
	Moon I. L.	- -	8 58 39·17	127·47	66·51	22 32 44·5	514·1
	ν Cancri -	6	8 54 15·37			25 1	
	ξ Cancri -	5½	9 1 1·13			N.22 38	
22	ν Cancri -	6	8 54 15·37			N.25 1	
	ξ Cancri -	5½	9 1 1·12			22 38	
	Moon I. U.	6·6	9 23 46·95	123·87	65·55	20 42 52·8	—583·1
	Moon I. L.	- -	9 48 13·18	120·57	64·66	18 40 0·5	644·3
	ε Leonis -	3	9 37 37·21			24 26	
	η Leonis -	3½	9 59 25·77			N.17 28	
23	ε Leonis -	3	9 37 37·20			N.24 26	
	η Leonis -	3½	9 59 25·75			17 28	
	Moon I. U.	7·7	10 12 2·18	117·68	63·87	16 25 39·2	—698·1
	Moon I. L.	- -	10 35 19·63	115·32	63·21	14 1 14·3	745·0
	B.A.C. 3579	6	10 21 3·95			15 5	
	ρ Leonis *	4	10 25 11·03			N.10 3	
24	B.A.C. 3579	6	10 21 3·93			N.15 5	
	ρ Leonis *	4	10 25 11·01			10 3	
	Moon I. U.	8·7	10 58 12·12	113·53	62·70	11 28 6·0	—785·4
	Moon I. L.	- -	11 20 46·92	112·38	62·36	8 47 30·0	819·6
	σ Leonis *	4	11 13 40·31			6 49	
	ν Virginis *	4½	11 38 25·40			N. 7 20	
25	σ Leonis *	4	11 13 40·30			N. 6 49	
	ν Virginis *	4½	11 38 25·39			7 20	
	Moon I. U.	9·7	11 43 11·93	111·90	62·21	6 0 40·4	—847·7
	Moon I. L.	- -	12 5 35·46	112·14	62·26	3 8 51·1	869·5
	ο Virginis *	4½	11 57 50·43			9 32	
	η Virginis -	3½	12 12 30·31			N. 0 8	
26	ο Virginis *	4½	11 57 50·42			N. 9 32	
	η Virginis -	3½	12 12 30·31			0 8	
	Moon I. U.	10·7	12 28 6·23	113·11	62·50	N. 0 13 19·5	—884·7
	Moon I. L.	- -	12 50 53·27	114·86	62·97	S. 2 44 31·6	892·6
	δ Virginis *	3	12 48 19·28			N. 4 11	
	θ Virginis -	4½	13 2 28·02			S. 4 46	
27	δ Virginis *	3	12 48 19·27			N. 4 11	
	θ Virginis -	4½	13 2 28·02			S. 4 46	
	Moon I. U.	11·8	13 14 6·01	117·40	63·65	5 43 9·0	—892·2
	Moon I. L.	- -	13 37 53·99	120·74	64·55	8 40 47·0	—882·4
	m Virginis -	5½	13 34 1·74			S. 7 58	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
May 27	86 Virginis -	6	13 38 14·49			S. 11 42	
28	*m* Virginis -	5½	13 34 1·74			S. 7 58	
	86 Virginis -	6	13 38 14·49			11 42	
	Moon I. U.	12·8	14 2 26·96	124·89	65·64	11 35 23·9	—861·7
	Moon I. L.	- -	14 27 54·31	129·80	66·93	14 24 38·4	828·4
	λ Virginis -	4	14 11 17·76			12 42	
	α^2 Libræ -	2½	14 42 53·48			S. 15 26	
29	λ Virginis -	4	14 11 17·76			S. 12 42	
	α^2 Libræ -	2½	14 42 53·48			15 26	
	Moon I. U.	13·8	14 54 24·80	135·39	68·38	17 5 48·9	—780·7
	Moon I. L.	- -	15 22 5·78	141·52	69·93	19 35 51·0	716·8
	ζ^1 Libræ - -	4	15 20 6·95			16 12	
	γ Libræ - -	4½	15 27 27·03			S. 14 18	
30	ζ^1 Libræ - -	4	15 20 6·95			S. 16 12	
	γ Libræ - -	4½	15 27 27·03			14 18	
	Moon I. U.	14·9	15 51 2·29	147·93	71·54	21 51 23·3	—635·4
	Moon I. L.	- -	16 21 15·72	154·28	73·10	23 48 48·6	535·7
	α Scorpii -	1½	16 20 33·40			26 7	
	τ Scorpii -	3½	16 26 53·81			S. 27 55	
31	α Scorpii -	1½	16 20 33·41			S. 26 7	
	τ Scorpii -	3½	16 26 53·82			27 55	
	Moon II. U.	15·9	16 55 11·98	160·35	74·53	25 24 30·2	—418·2
	θ Ophiuchi -	3½	17 13 8·53			24 51	
	d Ophiuchi -	4	17 18 8·01			S. 29 44	
June 1	θ Ophiuchi -	3½	17 13 8·55			S. 24 51	
	d Ophiuchi -	4	17 18 8·03			29 44	
	Moon II. L.	- -	17 27 46·25	165·15	75·69	26 35 3·0	—284·7
	Moon II. U.	17·0	18 1 9·69	168·46	76·51	27 17 35·2	—138·8
	δ Sagittarii	3½	18 11 44·79			29 53	
	λ Sagittarii	4	18 19 3·35			S. 25 30	
2	δ Sagittarii	3½	18 11 44·81			S. 29 53	
	λ Sagittarii	4	18 19 3·38			25 30	
	Moon II. L.	- -	18 35 2·10	169·93	76·88	27 30 5·	
	Moon II. U.	18·0	19 9 0·34	169·43	76·80	27 11 42	
	h^3 Sagittarii	4½	19 27 54·61			25 12	
	c Sagittarii	4½	19 53 45·96			S. 28 6	
3	h^3 Sagittarii	4½	19 27 54·64			S. 25	
	c Sagittarii	4½	19 53 45·99			28	
	Moon II. L.	- -	19 42 41·16	167·07	76·28	26	
	Moon II. U.	19·0	20 15 43·97	163·18	75·39	25	
	ψ Capricorni	4½	20 37 31·81			25	
	ω Capricorni	5½	20 43 11·23			S. 27	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. ☾'s D in 1 h of Lo
1855.			h m s	s	s	° ′ ″	
June 4	ψ Capricorni	4½	20 37 31·84			S. 25 47	
	ω Capricorni	5½	20 43 11·26			27 27	
	Moon II. L.	- -	20 47 53·24	158·23	74·23	23 20 19·7	+583
	Moon II. U.	20·1	21 18 59·39	152·75	72·91	21 12 27·0	692
	γ Capricorni	4	21 32 4·36			17 19	
	δ Capricorni	3½	21 39 3·14			S. 16 47	
5	γ Capricorni	4	21 32 4·39			S. 17 19	
	δ Capricorni	3½	21 39 3·17			16 47	
	Moon II. L.	- -	21 48 58·74	147·18	71·54	18 44 40·2	+782
	Moon II. U.	21·1	22 17 52·66	141·90	70·22	16 0 34·4	855
	τ^3 Aquarii -	5½	22 41 55·48			14 21	
	δ Aquarii -	3	22 46 57·76			S. 16 35	
6	τ^3 Aquarii -	5½	22 41 55·51			S. 14 **21**	
	δ Aquarii -	3	22 46 57·79			16 **35**	
	Moon II. L.	- -	22 45 46·36	137·17	69·01	13 3 38·9	+911
	Moon II. U.	22·1	23 12 47·65	133·18	67·97	9 57 11·2	951
	27 Piscium -	5	23 51 15·28			4 22	
	33 Piscium -	5	23 57 55·11			S. 6 31	
7	27 Piscium -	5	23 51 15·31			S. 4 22	
	33 Piscium -	5	23 57 55·14			6 31	
	Moon II. L.	- -	23 39 5·92	130·01	67·13	6 44 14·6	+976
	Moon II. U.	23·2	0 4 51·38	127·72	66·51	S. 3 27 38·2	987
	B.A.C. 221 *	6	0 40 46·68			N. 4 32	
	20 Ceti - - -	5	0 45 36·15			S. 1 56	
8	B.A.C. 221 *	6	0 40 46·72			N. 4 32	
	20 Ceti - - -	5	0 45 36·18			S. 1 56	
	Moon II. L.	- -	0 30 14·57	126·30	66·11	S. 0 9 58·6	+986
	Moon II. U.	24·2	0 55 25·81	125·72	65·93	N. 3 6 17·3	973
	μ Piscium *	4½	1 22 35·29			5 24	
	ν Piscium *	5	1 33 53·09			N. 4 45	
9	μ Piscium *	4½	1 22 35·32			N. 5 24	
	ν Piscium *	5	1 33 53·11			4 45	
	Moon II. L.	- -	1 20 35·07	125·95	65·98	6 18 49·5	+949
	Moon II. U.	25·3	1 45 51·60	126·92	66·21	9 25 23·1	914
	ξ Arietis *	5½	2 17 2·63			9 57	
	ξ^2 Ceti - - *	4	2 20 26·88			N. 7 48	
10	Moon II. L.	- -	2 11 23·80	128·55	66·62	N. 12 23 45·2	+867
	Moon II. U.	26·3	2 37 18·86	130·71	67·17	15 11 44·3	810
11	Moon II. L.	- -	3 3 42·37	133·26	67·81	N. 17 47 11·2	+742
	Moon II. U.	27·3	3 30 38·00	136·03	68·52	20 7 58·4	663
12	Moon II. L.	- -	3 58 7·12	138·80	69·21	N. 22 12 4·0	+575
	Moon II. U.	28·4	4 26 8·30	141·33	69·85	N. 23 57 35·7	+478

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
June 13	Moon II. L.	- -	4 54 37·26	143·39	70·36	N.25 22 56·1	+373·9
	Moon II. U.	29·4	5 23 26·90	144·75	70·70	26 26 48·1	264·0
14	Moon I. L.	- -	5 50 6·05	145·23	70·83	N.27 8 20·3	+151·1
15	Moon I. U.	0·9	6 19 7·06	144·78	70·72	N.27 27 11·6	+ 37·6
	Moon I. L.	- -	6 47 56·85	143·36	70·37	27 23 31·8	− 73·7
16	Moon I. U.	1·9	7 16 24·18	141·05	69·80	N.26 58 1·5	−180·4
	Moon I. L.	- -	7 44 19·34	138·03	69·05	26 11 46·4	280·8
17	Moon I. U.	3·0	8 11 34·98	134·50	68·16	N.25 6 12·7	−373·4
	Moon I. L.	- -	8 38 6·35	130·70	67·19	23 42 59·5	457·3
18	θ Cancri -	5½	8 23 19·18			N.18 35	
	γ Cancri -	4½	8 34 53·17			21 59	
	Moon I. U.	4·0	9 3 51·46	126·83	66·19	22 3 51·6	−532·5
	Moon I. L.	- -	9 28 50·77	123·10	65·21	20 10 35·2	598·8
	λ Leonis -	4½	9 23 26·53			23 36	
	ε Leonis -	3	9 37 36·95			N.24 26	
19	λ Leonis -	4½	9 23 26·52			N.23 36	
	ε Leonis -	3	9 37 36·95			24 26	
	Moon I. U.	5·0	9 53 6·97	119·66	64·30	18 4 53·6	−656·8
	Moon I. L.	- -	10 16 44·36	116·65	63·49	15 48 23·2	707·0
	α Leonis *	1½	10 0 38·93			12 40	
	γ Leonis -	2	10 11 58·73			N.20 34	
20	α Leonis *	1½	10 0 38·92			N.12 40	
	γ Leonis -	2	10 11 58·72			20 34	
	Moon I. U.	6·1	10 39 48·63	114·16	62·81	13 22 33·9	−750·0
	Moon I. L.	- -	11 2 26·47	112·25	62·29	10 48 49·1	786·4
	χ Leonis *	4½	10 57 32·61			8 7	
	σ Leonis *	4	11 13 40·05			N. 6 49	
21	χ Leonis *	4½	10 57 32·60			N. 8 7	
	σ Leonis *	4	11 13 40·04			6	
	Moon I. U.	7·1	11 24 45·26	110·99	61·95		816·5
	Moon I. L.	- -	11 46 53·06	110·43	61·79		840·6
	ν Virginis *	4½	11 38 25·14				
	β Virginis -	3½	11 43 9·26				
22	ν Virginis *	4½	11 38 25·13				
	β Virginis -	3½	11 43 9·25				
	Moon I. U.	8·1	12 8 58·31	110·58	61		·8
	Moon I. L.	- -	12 31 9·94	111·50	62		·8
	γ Virginis -	4	12 34 19·84				
	35 Virginis *	6	12 40 29·52				
23	γ Virginis -	4	12 34 19·83				

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. ☾'s D in 1 h of Lo
1855.			h m s	s	s	° ′ ″	
June23	35 Virginis *	6	12 40 29·51			N. 4 22	
	Moon I. U.	9·2	12 53 37·34	113·20	62·59	S. 3 15 17·5	−876
	Moon I. L.	- -	13 16 30·16	115·74	63·29	6 10 28·4	874
	θ Virginis -	4½	13 2 27·83			4 46	
	α Virginis -	1	13 17 34·66			S. 10 24	
24	θ Virginis -	4½	13 2 27·82			S. 4 46	
	α Virginis -	1	13 17 34·65			10 24	
	Moon I. U.	10·2	13 39 58·53	119·13	64·22	9 4 26·2	−863
	Moon I. L.	- -	14 4 12·73	123·38	65·37	11 55 20·4	843
	κ Virginis -	4	14 5 11·43			9 36	
	λ Virginis -	4	14 11 17·67			S. 12 42	
25	κ Virginis -	4	14 5 11·43			S. 9 36	
	λ Virginis -	4	14 11 17·66			12 42	
	Moon I. U.	11·2	14 29 23·01	128·48	66·72	14 41 1·8	−811
	Moon I. L.	- -	14 55 39·18	134·35	68·25	17 18 58·5	765
	α^2 Libræ - -	2½	14 42 53·45			15 26	
	ν^1 Libræ - -	5	14 58 34·60			S. 15 41	
26	α^2 Libræ - -	2½	14 42 53·45			S. 15 26	
	ν^1 Libræ - -	5	14 58 34·60			15 41	
	Moon I. U.	12·3	15 23 9·89	140·87	69·91	19 46 15·0	−704
	Moon I. L.	- -	15 52 1·63	147·81	71·64	21 59 30·3	625
	δ Scorpii -	3	15 51 48·02			22 12	
	β^1 Scorpii -	2	15 57 2·70			S. 19 24	
27	δ Scorpii -	3	15 51 48·02			S. 22 12	
	β^1 Scorpii -	2	15 57 2·70			19 24	
	Moon I. U.	13·3	16 22 17·48	154·82	73·35	23 55 4·4	−527
	Moon I. L.	- -	16 53 55·62	161·43	74·92	25 29 7·1	410
	A Ophiuchi -	4½	17 6 28·56			26 23	
	θ Ophiuchi -	3½	17 13 8·86			S. 24 51	
28	A Ophiuchi -	4½	17 6 28·56			S. 26 23	
	θ Ophiuchi -	3½	17 13 8·87			24 51	
	Moon I. U.	14·3	17 26 48·00	167·09	76·25	26 37 54·2	−274
	Moon I. L.	- -	18 0 39·85	171·25	77·21	27 18 7·7	−125
	μ^1 Sagittarii	4	18 5 7·92			21 6	
	δ Sagittarii	3½	18 11 45·28			S. 29 53	
29	μ^1 Sagittarii	4	18 5 7·93			S. 21 6	
	δ Sagittarii	3½	18 11 45·30			29 53	
	Moon II. U.	15·4	18 37 45·59	173·48	77·71	27 27 21·6	+ 34
	σ Sagittarii	3	18 46 19·04			26 28	
	ζ Sagittarii	3½	18 53 25·62			S. 30 5	
30	σ Sagittarii	3	18 46 19·05			S. 26 28	
	ζ Sagittarii	3½	18 53 25·63			30 5	
	Moon II. L.	- -	19 12 29·24	173·41	77·71	S. 27 4 22·1	+195

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
June 30	Moon II. U.	16·4	19 46 59·09	171·22	77·22	S. 26 9 19·4	+ 353·2
	ρ Capricorni	5	20 20 37·39			18 17	
	ψ Capricorni	4½	20 37 32·60			S. 25 47	
July 1	ρ Capricorni	5	20 20 37·41			S. 18 17	
	ψ Capricorni	4½	20 37 32·63			25 47	
	Moon II. L.	- -	20 20 51·63	167·28	76·31	24 43 47·5	+ 499·7
	Moon II. U.	17·5	20 53 48·70	162·08	75·10	22 50 30·3	630·1
	ζ Capricorni	4	21 18 25·11			23 2	
	γ Capricorni	4	21 32 5·19			S. 17 19	
2	ζ Capricorni	4	21 18 25·14			S. 23 2	
	γ Capricorni	4	21 32 5·22			17 19	
	Moon II. L.	- -	21 25 38·80	156·22	73·71	20 33 2·0	+ 741·2
	Moon II. U.	18·5	21 56 17·24	150·22	72·25	17 55 24·0	831·6
	τ^3 Aquarii -	5½	22 41 56·36			14 21	
	δ Aquarii -	3	22 46 58·64			S. 16 35	
3	τ^3 Aquarii -	5½	22 41 56·39			S. 14 21	
	δ Aquarii -	3	22 46 58·68			16 35	
	Moon II. L.	- -	22 25 45·02	144·50	70·85	15 1 44·0	+ 901·6
	Moon II. U.	19·5	22 54 7·44	139·36	69·56	11 56 2·1	952·2
	φ Aquarii -	5	23 6 50·25			6 50	
	ψ^3 Aquarii -	5	23 11 26·47			S. 10 24	
4	φ Aquarii -	5	23 6 50·28			S. 6 50	
	ψ^3 Aquarii -	5	23 11 26·50			10 24	
	Moon II. L.	- -	23 21 32·78	135·00	68·45	8 42 3·0	+ 984·8
	Moon II. U.	20·6	23 48 10·94	131·51	67·54	5 23 10·4	1001·4
	33 Piscium -	5	23 57 56·02			6 31	
	12 Ceti - -	6	0 22 39·37			S. 4 46	
5	33 Piscium -	5	23 57 56·05			S. 6 31	
	12 Ceti - -	6	0 22 39·41			4 46	
	Moon II. L.	- -	0 14 12·69	128·94	66·87	S. 2 2 27·4	+1003·5
	Moon II. U.	21·6	0 39 49·01	127·27	66·42	N. 1 17 20·9	992·5
	ε Piscium *	4	0 55 26·18			7 6	
	e Piscium *	5	1 0 55·01			N. 4 [illegible]	
6	ε Piscium *	4	0 55 26·21			N.	
	e Piscium *	5	1 0 55·04				
	Moon II. L.	- -	1 5 10·59	126·48	66·2		969·8
	Moon II. U.	22·7	1 30 27·64	126·50	66·2		936·1
	o Piscium *	5	1 37 45·13				
	54 Ceti - - *	6	1 43 11·22				
7	o Piscium *	5	1 37 45·17				
	54 Ceti - - *	6	1 43 11·26				
	Moon II. L.	- -	1 55 49·59	127·28	66		2·1
	Moon II. U.	23·7	2 21 24·83	128·70			[illegible]·2

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var ☾'s in 1 of I
1855.			h m s	s	s	° ′ ″	
July 7	B.A.C. 845 *	4	2 37 6·90			N. 9 30	
	ϑ Arietis -	4	3 3 20·87			19 10	
8	B.A.C. 845 *	4	2 37 6·93			N. 9 30	
	ϑ Arietis -	4	3 3 20·90			19 10	
	Moon II. L. - -		2 47 20·52	130·66	67·26	16 22 11·3	+77
	Moon II. U.	24·7	3 13 42·15	133·00	67·86	18 50 0·5	7(
	η Tauri - -	3	3 38 52·36			23 39	
	A' Tauri - -	5	3 56 7·71			N.21 41	
9	η Tauri - -	3	3 38 52·39			N.23 39	
	A' Tauri - -	5	3 56 7·74			21 41	
	Moon II. L. - -		3 40 33·31	135·55	68·50	21 2 21·7	+62
	Moon II. U.	25·8	4 7 55·23	138·09	69·13	N.22 57 29·9	52
10	Moon II. L. - -		4 35 46·55	140·40	69·70	N.24 33 48·8	+43
	Moon II. U.	26·8	5 4 3·05	142·25	70·14	25 49 55·7	32
11	Moon II. L. - -		5 32 37·95	143·43	70·42	N.26 44 45·5	+21
	Moon II. U.	27·9	6 1 22·15	143·78	70·49	27 17 36·3	+10
12	Moon II. L. - -		6 30 5·04	143·21	70·33	N.27 28 13·3	—
	Moon II. U.	28·9	6 58 35·53	141·72	69·94	27 16 50·1	11
13	Moon II. L. - -		7 26 43·06	139·40	69·34	N.26 44 8·2	—21
14	Moon I. U.	0·3	7 52 1·36	136·55	68·57	N.25 51 13·7	—31
	Moon I. L. - -		8 18 59·58	133·10	67·68	24 39 31·5	40
15	Moon I. U.	1·3	8 45 14·53	129·37	66·71	N.23 10 40·3	—48
	Moon I. L. - -		9 10 44·25	125·59	65·72	21 26 25·6	55
16	Moon I. U.	2·4	9 35 29·15	121·93	64·74	N.19 28 34·5	—62
	Moon I. L. - -		9 59 31·67	118·55	63·85	17 18 52·3	67
17	Moon I. U.	3·4	10 22 55·91	115·57	63·05	N.14 58 59·4	—72
	Moon I. L. - -		10 45 47·28	113·08	62·38	12 30 29·6	76
18	c Leonis *	5½	10 53 14·02			N. 6 53	
	ϰ Leonis *	4½	10 57 32·43			8 7	
	Moon I. U.	4·4	11 8 12·12	111·16	61·87	9 54 50·2	—79
	Moon I. L. - -		11 30 17·53	109·85	61·52	7 13 22·8	81
	ν Virginis *	4½	11 38 24·92			7 20	
	β Virginis -	3½	11 43 9·04			N. 2 35	
19	ν Virginis *	4½	11 38 24·91			N. 7 20	
	β Virginis -	3½	11 43 9·03			2 35	
	Moon I. U.	5·5	11 52 11·23	109·21	61·37	4 27 23·5	—83
	Moon I. L. - -		12 14 1·34	109·27	61·41	1 38 6·3	—85
	10 Virginis -	6	12 2 16·04			N. 2 43	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
July 19	η Virginis -	3½	12 12 29·83			N. 0 8	
20	10 Virginis -	6	12 2 16·03			N. 2 43	
	η Virginis -	3½	12 12 29·83			N. 0 8	
	Moon I. U.	6·5	12 35 56·52	110·06	61·66	S. 1 13 15·8	−860·0
	Moon I. L.	- -	12 58 5·76	111·62	62·13	4 5 27·8	860·9
	ψ Virginis -	5	12 46 49·71			8 45	
	θ Virginis -	4½	13 2 27·58			S. 4 46	
21	ψ Virginis -	5	12 46 49·70			S. 8 45	
	θ Virginis -	4½	13 2 27·57			4 46	
	Moon I. U.	7·5	13 20 38·48	113·98	62·81	6 57 9·2	−854·8
	Moon I. L.	- -	13 43 44·52	117·17	63·71	9 46 51·6	840·9
	m Virginis -	5½	13 34 1·33			7 58	
	86 Virginis -	6	13 38 14·09			S. 11 42	
22	m Virginis -	5½	13 34 1·33			S. 7 58	
	86 Virginis -	6	13 38 14·07			11 42	
	Moon I. U.	8·6	14 7 33·94	121·21	64·84	12 32 53·8	−817·9
	Moon I. L.	- -	14 32 16·93	126·10	66·16	15 13 18·7	784·4
	α^2 Libræ - -	2½	14 42 53·24			15 26	
	ξ^2 Libræ - -	5	14 48 55·81			S. 10 49	
23	α^2 Libræ - -	2½	14 42 53·23			S. 15 26	
	ξ^2 Libræ - -	5	14 48 55·80			10 49	
	Moon I. U.	9·6	14 58 3·42	131·78	67·67	17 45 49·1	−738·5
	Moon I. L.	- -	15 25 2·43	138·16	69·33	20 7 45·9	678·4
	κ Libræ - -	5	15 33 37·75			19 12	
	λ Libræ - -	4	15 44 57·36			S. 19 44	
24	κ Libræ - -	5	15 33 37·74			S. 19 12	
	λ Libræ - -	4	15 44 57·35			19 44	
	Moon I. U.	10·6	15 53 21·31	145·05	71·07	22 16 6·2	−602·1
	Moon I. L.	- -	16 23 4·44	152·15	72·83	24 7 25·4	508·0
	α Scorpii -	1½	16 20 33·51			26 7	
	τ Scorpii -	3½	16 26 53·95			S. 27 58	
25	α Scorpii -	1½	16 20 33·50			S. 26	
	τ Scorpii -	3½	16 26 53·94			27	
	Moon I. U.	11·7	16 54 11·94	159·03	74·49		
	Moon I. L.	- -	17 26 38·20	165·18	75·93		
	A Ophiuchi -	4½	17 6 28·56				
	θ Ophiuchi -	3½	17 13 8·88			S	
26	A Ophiuchi -	4½	17 6 28·56				
	θ Ophiuchi -	3½	17 13 8·88				
	Moon I. U.	12·7	18 0 11·05	170·03	77·02		
	Moon I. L.	- -	18 34 31·86	173·09	77·72		
	σ Sagittarii	3	18 46 19·28				
	ζ Sagittarii	3½	18 53 25·89				

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	
July 27	σ Sagittarii	3	18 46 19·29			S. 26 28	
	ζ Sagittarii	3½	18 53 25·89			30 5	
	Moon I. U.	13·7	19 9 17·07	174·06	77·92	27 6 37·4	+ 202
	Moon I. L.	- -	19 44 0·91	172·89	77·62	26 9 49·5	364
	h^2 Sagittarii	4½	19 27 55·63			25 12	
	c Sagittarii	4½	19 53 47·13			S. 28 6	
28	h^2 Sagittarii	4½	19 27 55·64			S. 25 12	
	c Sagittarii	4½	19 53 47·14			28 6	
	Moon I. U.	14·8	20 18 18·88	169·82	76·88	24 41 32·5	+ 516·6
	ι Capricorni	5	21 14 12·73			17 27	
	ζ Capricorni	4	21 18 25·72			S. 23 2	
29	ι Capricorni	5	21 14 12·74			S. 17 27	
	ζ Capricorni	4	21 18 25·73			23 2	
	Moon II. L.	- -	20 54 22·37	165·10	75·81	22 44 10·2	+ 654·1
	Moon II. U.	15·8	21 26 51·65	159·68	74·53	20 21 9·8	772·4
	δ Capricorni	3½	21 39 4·61			16 47	
	ι Aquarii -	4½	21 58 38·62			S. 14 34	
30	δ Capricorni	3½	21 39 4·63			S. 16 47	
	ι Aquarii -	4½	21 58 38·64			14 34	
	Moon II. L.	- -	21 58 13·50	153·95	73·15	17 36 37·4	+ 869·2
	Moon II. U.	16·9	22 28 27·04	148·37	71·79	14 34 58·8	943·5
	δ Aquarii -	3	22 46 59·41			16 35	
	ψ^1 Aquarii -	5½	23 8 19·66			S. 9 53	
31	δ Aquarii -	3	22 46 59·43			S. 16 35	
	ψ^1 Aquarii -	5½	23 8 19·68			9 53	
	Moon II. L.	- -	22 57 36·17	143·26	70·53	11 20 40·0	+ 996·1
	Moon II. U.	17·9	23 25 48·11	138·86	69·44	7 57 54·9	1028·2
	30 Piscium -	4½	23 54 33·44			6 49	
	33 Piscium -	5	23 57 56·81			S. 6 31	
Aug. 1	30 Piscium -	4½	23 54 33·47			S. 6 49	
	33 Piscium -	5	23 57 56·84			6 31	
	Moon II. L.	- -	23 53 12·19	135·30	68·54	4 30 37·9	+ 1041·7
	Moon II. U.	19·0	0 19 58·78	132·62	67·87	S. 1 2 21″·1	1038·5
	ε Piscium *	4	0 55 27·02			N. 7 6	
	e Piscium *	5	1 0 55·85			N. 4 53	
2	ε Piscium *	4	0 55 27·05			N. 7 6	
	e Piscium *	5	1 0 55·88			4 53	
	Moon II. L.	- -	0 46 18·56	130·82	67·42	2 23 45·8	+ 1020·4
	Moon II. U.	20·0	1 12 21·93	129·88	67·19	5 44 54·8	+ 989·0
	μ Piscium *	4½	1 22 37·01			5 24	
	π Piscium *	5	1 29 26·58			N. 11 24	
3	μ Piscium *	4½	1 22 37·04			N. 5 24	
	π Piscium *	5	1 29 26·60			N. 11 24	

	Name.	Mag.										
55. g. 3	Moon II. L.	- -										
	Moon II. U.	23·2										
	B.A.C. 625 +	4										
	ν Arietis -	5										
4	B.A.C. 627 +	4										
	ν Arietis -	5										
	Moon II. L.	- -										
	Moon II. U.	22·2										
	ι Arietis -	4										
	γ Tauri - -	2										
5	ι Arietis -	4										
	γ Tauri - -	2										
	Moon II. L.	- -										
	Moon II. U.	22·2										
	ε Tauri - -	3½										
	ε Tauri - -	3										
6	ε Tauri - -	3½										
	ε Tauri - -	3										
	Moon II. L.	- -										
	Moon II. U.	24·2										
	β Tauri - -	2										
	ζ Tauri - -	3½										
7	β Tauri - -	2										
	ζ Tauri - -	3½										
	Moon II. L.	- -										
	Moon II. U.	25·2										
	μ Geminor.	3										
	ν Geminor.	4										
8	Moon II. L.	- -										
	Moon II. U.	26·2										
9	Moon II. L.	- -										
	Moon II. U.	27·2										
10	Moon II. L.	- -										
	Moon II. U.	28·3										
11	Moon II. L.	- -										
	Moon II. U.	29·3										
12	Moon I. L.	- -										
13	Moon I. U.	0·7										
	Moon I. L.	- -										

Date.	Name.	Magnitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Aug. 14	Moon I. U.	1·8	10 53 12·99	112·25	62·05	N. 11 30 55·9	−779·4
	Moon I. L.	- -	11 15 28·80	110·48	61·57	8 52 0·9	808·6
15	Moon I. U.	2·8	11 37 26·81	109·29	61·26	N. 6 7 56·3	−831·0
	Moon I. L.	- -	11 59 14·24	108·72	61·13	3 20 4·3	846·6
16	Moon I. U.	3·8	12 20 58·76	108·81	61·19	N. 0 29 44·4	−855·7
	Moon I. L.	- -	12 42 48·36	109·58	61·45	S. 2 21 45·4	858·2
	γ Virginis -	4	12 34 19·36			S. 0 39	
	δ Virginis *	3	12 48 18·57			N. 4 11	
17	γ Virginis -	4	12 34 19·35			S. 0 39	
	δ Virginis *	3	12 48 18·56			N. 4 11	
	Moon I. U.	4·9	13 4 51·49	111·06	61·91	S. 5 13 5·0	−853·9
	Moon I. L.	- -	13 27 16·85	113·29	62·57	8 2 50·7	842·4
	α Virginis -	1	13 17 34·11			S. 10 24	
	ζ Virginis -	4	13 27 19·23			N. 0 9	
18	α Virginis -	1	13 17 34·10			S. 10 24	
	ζ Virginis -	4	13 27 19·22			N. 0 9	
	Moon I. U.	5·9	13 50 13·49	116·28	63·44	S. 10 49 31·9	−823·1
	Moon I. L.	- -	14 13 50·66	120·05	64·51	13 31 28·9	794·9
	κ Virginis -	4	14 5 10·87			9 36	
	λ Virginis -	4	14 11 17·09			S. 12 42	
19	κ Virginis -	4	14 5 10·86			S. 9 36	
	λ Virginis -	4	14 11 17·08			12 42	
	Moon I. U.	6·9	14 38 17·65	124·58	65·76	16 6 49·2	−756·7
	Moon I. L.	- -	15 3 43·38	129·83	67·19	18 33 25·2	707·2
	20 Libræ - -	3½	14 55 36·74			24 43	
	ζ¹ Libræ - -	4	15 20 6·48			S. 16 12	
20	20 Libræ - -	3½	14 55 36·73			S. 24 43	
	ζ¹ Libræ - -	4	15 20 6·46			16 12	
	Moon I. U.	8·0	15 30 16·07	135·71	68·75	20 48 51·1	−644·8
	Moon I. L.	- -	15 58 2·28	142·05	70·39	22 50 22·5	567·9
	σ Scorpii -	4	16 12 24·63			25 14	
	α Scorpii -	1½	16 20 33·18			S. 26 7	
21	σ Scorpii -	4	16 12 24·62			S. 25 14	
	α Scorpii -	1½	16 20 33·17			26 7	
	Moon I. U.	9·0	16 27 6·13	148·60	72·04	24 34 58·1	−475·3
	Moon I. L.	- -	16 57 28·04	155·00	73·61	25 59 24·2	366·3
	θ Ophiuchi -	3½	17 13 8·62			24 51	
	d Ophiuchi -	4	17 18 8·13			S. 29 44	
22	θ Ophiuchi -	3½	17 13 8·60			S. 24 51	
	d Ophiuchi -	4	17 18 8·12			29 44	
	Moon I. U.	10·0	17 29 3·67	160·81	75·01	27 0 24·6	−241·1
	Moon I. L.	- -	18 1 43·18	165·56	76·12	S. 27 34 54·7	−101·6

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Aug. 22	μ^1 Sagittarii	4	18 5 7·89			S. 21 6	
	δ Sagittarii	3½	18 11 45·28			29 53	
23	μ^1 Sagittarii	4	18 5 7·88			S. 21 6	
	δ Sagittarii	3½	18 11 45·26			29 53	
	Moon I. U.	11·1	18 35 11·18	168·82	76·86	27 40 20·8	+ 48·9
	Moon I. L.	- -	19 9 7·89	170·30	77·17	27 14 57·2	205·6
	ν^1 Sagittarii	5	18 45 27·45			22 55	
	ζ Sagittarii	3½	18 53 25·80			S. 30 5	
24	ν^1 Sagittarii	5	18 45 27·44			S. 22 55	
	ζ Sagittarii	3½	18 53 25·79			30 5	
	Moon I. U.	12·1	19 43 11·18	169·93	77·04	26 18 4·7	+ 362·6
	Moon I. L.	- -	20 16 59·36	167·83	76·51	24 50 17·1	513·7
	c Sagittarii	4½	19 53 47·19			28 6	
	π Capricorni	5	20 19 3·93			S. 18 41	
25	c Sagittarii	4½	19 53 47·18			S. 28 6	
	π Capricorni	5	20 19 3·93			18 41	
	Moon I. U.	13·1	20 50 13·72	164·37	75·66	22 53 21·0	+ 653·1
	Moon I. L.	- -	21 22 40·62	160·00	74·58	20 30 6·5	776·2
	γ Capricorni	4	21 32 6·10			17 19	
	δ Capricorni	3½	21 39 4·91			S. 16 47	
26	γ Capricorni	4	21 32 6·10			S. 17 19	
	δ Capricorni	3½	21 39 4·91			16 47	
	Moon I. U.	14·2	21 54 12·09	155·20	73·41	17 44 9·9	+ 879·6
	τ^3 Aquarii -	5½	22 41 57·55			14 21	
	δ Aquarii -	3	22 46 59·87			S. 16 35	
27	τ^3 Aquarii -	5½	22 41 57·56			S. 14 21	
	δ Aquarii -	3	22 46 59·88			16 35	
	Moon II. L.	- -	22 27 9·96	150·21	72·23	14 39 40·2	+ 961·6
	Moon II. U.	15·2	22 56 45·40	145·78	71·13	11 20 58·1	1021·7
	φ Aquarii -	5	23 6 51·48			6	
	ψ^3 Aquarii -	5	23 11 27·74			S.	
28	φ Aquarii -	5	23 6 51·49				
	ψ^3 Aquarii -	5	23 11 27·75				
	Moon II. L.	- -	23 25 30·89	141·92	70·		
	Moon II. U.	16·2	23 53 34·39	138·80	69		
	12 Ceti - -	6	0 22 40·85				
	13 Ceti - -	6	0 27 49·67				
29	12 Ceti - -	6	0 22 40·86				
	13 Ceti - -	6	0 27 49·68				
	Moon II. L.	- -	0 21 5·15	136·4			
	Moon II. U.	17·3	0 48 12·91	134·9			
	η Piscium -	4	1 23 46·10				
	ν Piscium *	5	1 33 55·54				

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1855.			h m s	s	s	° ′ ″	″
Aug. 30	η Piscium -	4	1 23 46·13			N. 14 36	
	ν Piscium *	5	1 33 55·57			4 45	
	Moon II. L. - -		1 15 7·34	134·24	68·33	6 19 39·5	+1023·6
	Moon II. U.	18·3	1 41 57·63	134·25	68·37	9 39 43·7	974·9
	ξ^1 Ceti - *	5	2 5 21·24			8 10	
	ξ^2 Ceti - - *	4	2 20 29·36			N. 7 48	
31	ξ^1 Ceti - - *	5	2 5 21·26			N. 8 10	
	ξ^2 Ceti - - *	4	2 20 29·38			7 48	
	Moon II. L. - -		2 8 51·97	134·90	68·58	12 48 46·7	+ 913·6
	Moon II. U.	19·4	2 35 57·38	136·08	68·91	15 44 25·0	841·0
	ε Arietis -	5	2 50 57·73			20 45	
	δ Arietis -	4	3 3 22·65			N. 19 10	
Sept. 1	ε Arietis -	5	2 50 57·75			N. 20 45	
	δ Arietis -	4	3 3 22·68			19 10	
	Moon II. L. - -		3 3 19·23	137·62	69·34	18 24 30·9	+ 758·4
	Moon II. U.	20·4	3 31 1·01	139·36	69·81	20 47 11·7	667·0
	δ^3 Tauri - -	4½	4 15 46·19			17 6	
	ε Tauri - -	3½	4 20 10·93			N. 18 51	
2	δ^3 Tauri - -	4½	4 15 46·22			N. 17 6	
	ε Tauri - -	3½	4 20 10·96			18 51	
	Moon II. L. - -		3 59 3·94	141·11	70·27	22 50 49·6	+ 568·1
	Moon II. U.	21·4	4 27 26·83	142·65	70·68	24 34 2·3	463·1
	ι Tauri - -	4½	4 54 27·47			21 23	
	β Tauri - -	2	5 17 9·24			N. 28 29	
3	ι Tauri - -	4½	4 54 27·50			N. 21 23	
	β Tauri - -	2	5 17 9·28			28 29	
	Moon II. L. - -		4 56 6·05	143·80	70·97	25 55 45·5	+ 353·5
	Moon II. U.	22·5	5 24 55·65	144·36	71·10	26 55 14·7	241·1
	η Geminor.	4	6 6 8·74			22 33	
	μ Geminor.	3	6 14 12·50			N. 22 35	
4	η Geminor.	4	6 6 8·77			N. 22 33	
	μ Geminor.	3	6 14 12·53			22 35	
	Moon II. L. - -		5 53 47·79	144·20	71·04	27 32 7·2	+ 127·7
	Moon II. U.	23·5	6 22 33·47	143·28	70·78	27 46 23·8	+ 15·4
	ζ Geminor.	4	6 55 31·47			20 47	
	δ Geminor.	3½	7 11 28·61			N. 22 15	
5	ζ Geminor.	4	6 55 31·50			N. 20 47	
	δ Geminor.	3½	7 11 28·64			22 15	
	Moon II. L. - -		6 51 3·35	141·58	70·32	27 38 29·1	− 93·9
	Moon II. U.	24·5	7 19 8·53	139·18	69·66	27 9 9·5	− 198·5
	α^2 Geminor.	1½	7 25 21·58			32 12	
	β Geminor.	1½	7 36 27·19			N. 28 22	
6	α^2 Geminor.	1½	7 25 21·61			N. 32 12	

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1855.			h m s	s	s	° ′ ″	″
Sept. 6	β Geminor.	1½	7 36 27·21			N.28 22	
	Moon II. L.	- -	7 46 41·44	136·22	68·86	26 19 30·4	−296·9
	Moon II. U.	25·6	8 13 36·29	132·87	67·93	25 10 52·1	388·2
	θ Cancri -	5½	8 23 20·14			18 35	
	γ Cancri -	4½	8 34 54·06			N.21 59	
7	Moon II. L.	- -	8 39 49·45	129·30	66·95	N.23 44 46·3	−471·4
	Moon II. U.	26·6	9 5 19·35	125·69	65·95	22 2 50·7	546·4
8	Moon II. L.	- -	9 30 6·45	122·20	64·96	N.20 6 45·3	−613·1
	Moon II. U.	27·6	9 54 12·96	118·94	64·03	17 58 10·8	671·3
9	Moon II. L.	- -	10 17 42·45	116·04	63·19	N.15 38 46·0	−721·5
	Moon II. U.	28·7	10 40 39·66	113·57	62·48	13 10 5·8	763·9
10	Moon II. L.	- -	11 3 10·11	111·59	61·91	N.10 33 42·7	−798·7
11	Moon I. U.	0·0	11 23 17·02	110·20	61·49	N. 7 51 6·2	−826·2
	Moon I. L.	- -	11 45 13·46	109·30	61·24	5 3 42·4	846·6
12	Moon I. U.	1·1	12 7 2·67	109·00	61·16	N. 2 12 56·2	−859·9
	Moon I. L.	- -	12 28 51·98	109·32	61·28	S. 0 39 47·0	866·1
13	Moon I. U.	2·1	12 50 48·98	110·29	61·58	S. 3 33 1·7	−865·1
	Moon I. L.	- -	13 13 1·54	111·92	62·07	6 25 19·6	856·6
14	Moon I. U.	3·1	13 35 37·72	114·23	62·76	S. 9 15 8·1	−840·1
	Moon I. L.	- -	13 58 45·75	117·23	63·64	12 0 47·8	815·0
15	κ Virginis -	4	14 5 10·58			S. 9 36	
	λ Virginis -	4	14 11 16·79			12 42	
	Moon I. U.	4·2	14 22 33·82	120·90	64·69	14 40 31·4	−780·6
	Moon I. L.	- -	14 47 9·91	125·23	65·91	17 12 21·1	735·9
	α^2 Libræ - -	2½	14 42 52·55			15 26	
	ξ^2 Libræ - -	5	14 48 55·13			S. 10 49	
16	α^2 Libræ - -	2½	14 42 52·54			S. 15 26	
	ξ^2 Libræ - -	5	14 48 55·12			10 49	
	Moon I. U.	5·2	15 12 41·48	130·13	67·25	19 34 7·5	−679·9
	Moon I. L.	- -	15 39 14·93	135·51	68·69	21 43 28·4	611·4
	δ Scorpii -	3	15 51 47·12			22 12	
	B.A.C. 5330	5½	15 57 2·34			S. 19 24	
17	δ Scorpii -	3	15 51 47·10			S. 22 12	
	B.A.C. 5330	5½	15 57 2·33			10 24	
	Moon I. U.	6·2	16 6 54·87	141·18	70·18	48·9	−529·7
	Moon I. L.	- -	16 35 43·39	146·90	71·	·1	−4
	α Scorpii -	1½	16 20 32·72				
	τ Scorpii -	3½	16 26 53·15				

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1855.			h m s	s	s	° ′ ″	″
Sept. 18	α Scorpii -	1½	16 20 32·70			S. 26 7	
	τ Scorpii -	3½	16 26 53·13			27 55	
	Moon I. U.	7·3	17 5 39·21	152·34	73·02	26 30 28·2	− 324·2
	Moon I. L.	- -	17 36 36·95	157·15	74·19	27 23 13·7	201 2
	θ Ophiuchi -	3½	17 13 8·16			24 51	
	d Ophiuchi -	4	17 18 7·65			S. 29 44	
19	θ Ophiuchi -	3½	17 13 8·14			S. 24 51	
	d Ophiuchi -	4	17 18 7·63			29 44	
	Moon I. U.	8·3	18 8 26·72	160·95	75·11	27 50 13·1	− 66·9
	Moon I. L.	- -	18 40 54·63	163·45	75·70	27 49 26·2	+ 75·8
	σ Sagittarii	3	18 46 18·80			26 28	
	ζ Sagittarii	3½	18 53 25·42			S. 30 5	
20	σ Sagittarii	3	18 46 18·78			S. 26 28	
	ζ Sagittarii	3½	18 53 25·40			30 5	
	Moon I. U.	9·3	19 13 43·72	164·46	75·91	27 19 36·0	+ 222·9
	Moon I. L.	- -	19 46 35·82	163·97	75·76	26 20 17·4	369·7
	b Sagittarii	5	19 48 5·33			27 33	
	c Sagittarii	4½	19 53 46·91			S. 28 6	
21	b Sagittarii	5	19 48 5·32			S. 27 33	
	c Sagittarii	4½	19 53 46·90			28 6	
	Moon I. U.	10·4	20 19 13·64	162·13	75·28	24 52 2·6	+ 511·5
	Moon I. L.	- -	20 51 22·67	159·23	74·54	22 56 19·9	643·7
	υ Capricorni	5	20 31 50·15			18 39	
	ψ Capricorni	4½	20 37 33·12			S. 25 47	
22	υ Capricorni	5	20 31 50·14			S. 18 39	
	ψ Capricorni	4½	20 37 33·11			25 47	
	Moon I. U.	11·4	21 22 52·45	155·65	73·63	20 35 26·1	+ 762·7
	Moon I. L.	- -	21 53 37·14	151·78	72·64	17 52 19·5	865·5
	γ Capricorni	4	21 32 6·05			17 19	
	δ Capricorni	3½	21 39 4·87			S. 16 47	
23	γ Capricorni	4	21 32 6·04			S. 17 19	
	δ Capricorni	3½	21 39 4·87			16 47	
	Moon I. U.	12·4	22 23 35·33	147·95	71·66	14 50 26·2	+ 950·2
	Moon I. L.	- -	22 52 49·33	144·46	70·77	11 33 31·8	1015·6
	δ Aquarii -	3	22 47 0·00			16 35	
	ψ' Aquarii -	5½	23 8 20·34			S. 9 53	
24	δ Aquarii -	3	22 47 0·00			S. 16 35	
	ψ' Aquarii -	5½	23 8 20·35			9 53	
	Moon I. U.	13·5	23 21 24·40	141·50	70·01	8 5 31·7	+1061·1
	Moon I. L.	- -	23 49 27·84	139·20	69·43	4 30 24·2	+1086·8
	30 Piscium -	4½	23 54 34·33			6 49	
	33 Piscium -	5	23 57 57·72			S. 6 31	
25	30 Piscium -	4½	23 54 34·34			S. 6 49	

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1855.			h m s	s	s	° ′ ″	″
Sept. 25	33 Piscium -	5	23 57 57·72			S. 6 31	
	Moon II. U.	14·5	0 19 26·15	137·59	69·04	S. 0 52 5·3	+1093·1
	ε Piscium *	4	0 55 28·16			N. 7 6	
	e Piscium *	5	1 0 57·01			N. 4 53	
26	ε Piscium *	4	0 55 28·17			N. 7 6	
	e Piscium *	5	1 0 57·02			4 53	
	Moon II. L. - -		0 46 51·83	136·82	68·86	2 45 36·6	+1080·8
	Moon II. U.	15·6	1 14 12·67	136·78	68·88	6 19 2·8	1050·7
	π Piscium *	5	1 29 27·84			11 24	
	o Piscium *	5	1 37 47·29			N. 8 26	
27	π Piscium *	5	1 29 27·86			N. 11 24	
	o Piscium *	5	1 37 47·31			8 26	
	Moon II. L. - -		1 41 37·16	137·41	69·08	9 44 47·6	+1004·1
	Moon II. U.	16·6	2 9 12·71	138·60	69·44	12 59 40·1	942·2
	31 Arietis *	5½	2 28 46·52			11 49	
	B.A.C. 845 *	4	2 37 9·25			N. 9 30	
28	31 Arietis *	5½	2 28 46·54			N. 11 49	
	B.A.C. 845 *	4	2 37 9·27			9 30	
	Moon II. L. - -		2 37 5·37	140·23	69·91	16 0 46·0	+ 866·6
	Moon II. U.	17·6	3 5 19·30	142·12	70·44	18 45 28·2	778·6
	τ' Arietis -	5	3 12 54·40			20 37	
	η Tauri - -	3	3 38 54·98			N. 23 39	
29	τ' Arietis -	5	3 12 54·42			N. 20 37	
	η Tauri - -	3	3 38 55·01			23 39	
	Moon II. L. - -		3 33 56·44	144·06	70·98	21 11 29·4	+ 680·0
	Moon II. U.	18·7	4 2 56·15	145·84	71·48	23 16 53·4	572·7
	ε Tauri - -	3½	4 20 11·79			18 51	
	α Tauri - -	1	4 27 38·74			N. 16 13	
30	ε Tauri - -	3½	4 20 11·81			N. 18 51	
	α Tauri - -	1	4 27 38·77			16 13	
	Moon II. L. - -		4 32 15·05	147·23	71·87	25 0 7·8	+ 458·8
	Moon II. U.	19·7	5 1 47·16	148·01	72·09	26 20 7·1	340·6
	ζ Tauri - -	3½	5 29 1·19			21 3	
	136 Tauri - -	4½	5 44 15·24			N. 27 34	
Oct. 1	ζ Tauri - -	3½	5 29 1·22			N. 21 3	
	136 Tauri - -	4½	5 44 15·27			27 34	
	Moon II. L. - -		5 31 24·2[illegible]			27 16	+ 220·4
	Moon II. U.	20·7	6 0 56·[illegible]			27 4[illegible]	100·8
	μ Geminor.	3	6 14 12·[illegible]			22	
	ε Geminor.	3	6 35 [illegible]			25	
2	μ Geminor.	3	6 14 1[illegible]			2	
	ε Geminor.	3	6 35 [illegible]			5	
	Moon II. L. - -		6 30 [illegible]			7 :	

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1855.			h m s	s	s	° ′ ″	″
Oct. 2	Moon II. U.	21·8	6 59 5·11	143·00	70·86	N.27 42 17·7	—127·7
	α^2 Geminor.	1½	7 25 22·47			32 12	
	β Geminor.	1½	7 36 28·03			N.28 22	
3	α^2 Geminor.	1½	7 25 22·51			N.32 12	
	β Geminor.	1½	7 36 28·06			28 22	
	Moon II. L.	- -	7 27 22·90	139·87	70·04	27 6 6·6	—232·9
	Moon II. U.	22·8	7 55 0·04	136·26	69·08	26 9 37·7	330·5
	ψ^2 Cancri -	4	8 1 44·49			25 57	
	γ Cancri -	4½	8 34 54·77			N.21 59	
4	ψ^2 Cancri -	4	8 1 44·52			N.25 57	
	γ Cancri -	4½	8 34 54·80			21 59	
	Moon II. L.	- -	8 21 52·16	132·40	68·03	24 54 27·5	—419·7
	Moon II. U.	23·9	8 47 57·28	128·46	66·95	23 22 18·8	500·3
	ξ Cancri -	5½	9 1 2·29			22 38	
	λ Leonis -	4½	9 23 27·68			N.23 36	
5	ξ Cancri -	5½	9 1 2·32			N.22 38	
	λ Leonis -	4½	9 23 27·71			23 36	
	Moon II. L.	- -	9 13 15·67	124·63	65·87	21 34 55·7	—572·2
	Moon II. U.	24·9	9 37 49·50	121·06	64·85	19 34 0·0	635·7
	α Leonis *	1½	10 0 39·68			12 40	
	γ Leonis -	2	10 11 59·40			N.20 34	
6	Moon II. L.	- -	10 1 42·47	117·84	63·91	N.17 21 10·3	—691·3
	Moon II. U.	25·9	10 24 59·51	115·08	63·09	14 58 0·7	739·1
7	Moon II. L.	- -	10 47 46·34	112·82	62·42	N.12 26 1·4	—779·6
	Moon II. U.	27·0	11 10 9·39	111·12	61·89	9 46 38·5	813·1
8	Moon II. L.	- -	11 32 15·45	110·00	61·54	N. 7 1 15·7	—839·6
	Moon II. U.	28·0	11 54 11·68	109·48	61·36	4 11 16·5	859·1
9	Moon II. L.	- -	12 16 5·44	109·59	61·37	N. 1 18 4·7	—871·7
	Moon II. U.	29·0	12 38 4·29	110·33	61·56	S. 1 36 54·7	876·9
10	Moon II. L.	- -	13 0 15·98	111·73	61·95	S. 4 32 11·1	—874·5
11	Moon I. U.	0·4	13 20 43·24	113·66	62·53	S. 7 26 9·5	—863·8
	Moon I. L.	- -	13 43 42·56	116·34	63·30	10 17 7·1	844·3
12	Moon I. U.	1·4	14 7 17·84	119·65	64·24	S.13 3 13·0	—815·0
	Moon I. L.	- -	14 31 36·60	123·58	65·35	15 42 26·1	775·3
13	Moon I. U.	2·5	14 56 45·83	128·05	66·59	S.18 12 35·3	—724·2
	Moon I. L.	- -	15 22 51·48	132·96	67·92	20 31 18·1	660·8
14	Moon I. U.	3·5	15 49 57·90	138·15	69·32	S.22 36 3·0	—584·4
	Moon I. L.	- -	16 18 7·26	143·40	70·70	S.24 24 11·5	—494·7

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Oct. 15	σ Scorpii -	4	16 12 23·81			S. 25 14	
	α Scorpii -	1½	16 20 32·34			26 7	
	Moon I. U.	4·5	16 47 18·65	148·44	72·01	25 53 3·7	− 391·8
	Moon I. L.	- -	17 17 27·62	152·94	73·15	27 0 4·6	276·4
	θ Ophiuchi	3½	17 13 7·73			24 51	
	d Ophiuchi	4	17 18 7·20			S. 29 44	
16	θ Ophiuchi	3½	17 13 7·72			S. 24 51	
	d Ophiuchi	4	17 18 7·18			29 44	
	Moon I. U.	5·6	17 48 25·74	156·58	74·07	27 42 55·1	− 150·3
	Moon I. L.	- -	18 20 0·93	159·07	74·69	27 59 40·9	− 16·2
	μ^1 Sagittarii	4	18 5 7·03			21 6	
	δ Sagittarii	3½	18 11 44·34			S. 29 53	
17	μ^1 Sagittarii	4	18 5 7·01			S. 21 6	
	δ Sagittarii	3½	18 11 44·33			29 53	
	Moon I. U.	6·6	18 51 58·24	160·24	74·97	27 49 4·3	+ 122·8
	Moon I. L.	- -	19 24 1·37	160·05	74·92	27 10 31·6	262·5
	χ^1 Sagittarii	5½	19 16 28·80			24 47	
	h^3 Sagittarii	4½	19 27 54·84			S. 25 12	
18	χ^1 Sagittarii	5½	19 16 28·78			S. 24 47	
	h^3 Sagittarii	4½	19 27 54·83			25 12	
	Moon I. U.	7·6	19 55 54·32	158·58	74·55	26 4 16·6	+ 399·1
	Moon I. L.	- -	20 27 23·25	156·09	73·92	24 31 19·2	529·0
	ψ Capricorni	4½	20 37 32·72			25 47	
	ω Capricorni	5½	20 43 12·21			S. 27 27	
19	ψ Capricorni	4½	20 37 32·71			S. 25 47	
	ω Capricorni	5½	20 43 12·20			27 27	
	Moon I. U.	8·7	20 58 17·70	152·90	73·10	22 33 20·8	+ 648·8
	Moon I. L.	- -	21 28 31·24	149·33	72·19	20 12 36·2	756·3
	γ Capricorni	4	21 32 5·75			17 19	
	δ Capricorni	3½	21 39 4·60			S. 16 47	
20	γ Capricorni	4	21 32 5·74			S. 17 19	
	δ Capricorni	3½	21 39 4·58			16 47	
	Moon I. U.	9·7	21 58 1·53	145·74	71·	31 44·7	+ 849·7
	Moon I. L.	- -	22 26 49·91	142·39	'	44·0	927·7
	θ Aquarii -	4½	22 9 13·39				
	σ Aquarii -	5	22 23 0·88				
21	θ Aquarii -	4½	22 9 13·38				
	σ Aquarii -	5	22 23 0·87				
	Moon I. U.	10·7	22 55 0·70	139·		·9	+ 9
	Moon I. L.	- -	23 22 40·36	137		0	+ 10
	φ Aquarii -	5	23 6 51·56				
	ψ^3 Aquarii -	5	23 11 27·84				
22	φ Aquarii -	5	23 6 51·56				

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time*.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. (☾'s D in 1 h of Lo
1855.			h m s	s	s	° ′ ″	
Oct. 22	ψ^3 Aquarii -	5	23 11 27·83			S. 10 24	
	Moon I. U.	11·8	23 49 57·01	135·67	68·56	4 28 47·9	+106
	Moon I. L.	- -	0 16 59·49	134·88	68·33	0 54 39·5	107
	12 Ceti - -	6	0 22 41·31			4 46	
	13 Ceti - -	6	0 27 50·15			S. 4 24	
23	12 Ceti - -	6	0 22 41·31			S. 4 46	
	13 Ceti - -	6	0 27 50·16			S. 4 24	
	Moon I. U.	12·8	0 43 57·08	134·85	68·31	N. 2 40 3·4	+106
	Moon I. L.	- -	1 10 58·91	135·58	68·51	6 11 54·9	104
	μ Piscium *	4½	1 22 38·50			5 24	
	π Piscium *	5	1 29 28·12			N. 11 24	
24	μ Piscium *	4½	1 22 38·52			N. 5 24	
	π Piscium *	5	1 29 28·13			11 24	
	Moon I. U.	13·8	1 38 13·58	136·98	68·88	9 37 32·5	+100
	ξ^1 Ceti - - *	5	2 5 22·21			8 10	
	ξ^2 Ceti - - *	4	2 20 30·40			N. 7 48	
25	ξ^1 Ceti - - *	5	2 5 22·22			N. 8 10	
	ξ^2 Ceti - - *	4	2 20 30·41			7 48	
	Moon II. L.	- -	2 8 7·51	139·05	69·41	12 53 36·5	+ 95
	Moon II. U.	14·9	2 36 10·31	141·47	70·05	15 56 55·2	87
	ε Arietis -	5	2 50 58·96			20 45	
	δ Arietis -	4	3 3 23·93			N. 19 10	
26	ε Arietis -	5	2 50 58·98			N. 20 45	
	δ Arietis -	4	3 3 23·95			19 10	
	Moon II. L.	- -	3 4 43·69	144·11	70·76	18 44 27·6	+ 79
	Moon II. U.	15·9	3 33 48·89	146·73	71·46	21 13 28·5	69
	δ^2 Tauri - -	4½	4 15 47·72			17 6	
	ε Tauri - -	3½	4 20 12·49			N. 18 51	
27	δ^2 Tauri - -	4½	4 15 47·74			N. 17 6	
	ε Tauri - -	3½	4 20 12·51			18 51	
	Moon II. L.	- -	4 3 24·12	149·07	72·10	23 21 33·4	+ 58
	Moon II. U.	16·9	4 33 24·34	150·85	72·60	25 6 44·6	46
	ι Tauri - -	4½	4 54 29·14			21 23	
	β Tauri - -	2	5 17 11·06			N. 28 29	
28	ι Tauri - -	4½	4 54 29·17			N. 21 23	
	β Tauri - -	2	5 17 11·09			28 29	
	Moon II. L.	- -	5 3 41·31	151·83	72·89	26 27 37·1	+ 34
	Moon II. U.	18·0	5 34 4·22	151·82	72·94	27 23 21·4	21
	η Geminor.	4	6 6 10·53			22 33	
	μ Geminor.	3	6 14 14·29			N. 22 35	
29	η Geminor.	4	6 6 10·56			N. 22 33	
	μ Geminor.	3	6 14 14·32			22 35	
	Moon II. L.	- -	6 4 20·67	150·74	72·72	N. 27 53 47·6	+ 8

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1855.			h m s	s	s	° ′ ″	″
Oct. 29	Moon II. U.	19·0	6 34 17·84	148·62	72·22	N.27 59 22·6	— 32·7
	δ Geminor.	3½	7 11 30·38			22 15	
	ι Geminor.	4	7 16 45·86			N.28 5	
30	δ Geminor.	3½	7 11 30·42			N.22 15	
	ι Geminor.	4	7 16 45·90			28 5	
	Moon II. L.	- -	7 3 43·81	145·57	71·48	27 41 7·0	—148·6
	Moon II. U.	20·0	7 32 28·74	141·82	70·54	27 0 28·0	256·4
	φ Geminor.	5	7 44 39·77			27 8	
	ψ³ Cancri -	4	8 1 45·41			N.25 57	
31	φ Geminor.	5	7 44 39·81			N.27 8	
	ψ³ Cancri -	4	8 1 45·45			25 57	
	Moon II. L.	- -	8 0 25·51	137·59	69·46	25 59 10·3	—354·9
	Moon II. U.	21·1	8 27 30·02	133·15	68·30	24 39 9·5	443·6
	γ Cancri -	4½	8 34 55·68			21 59	
	ξ Cancri -	5½	9 1 3·14			N.22 38	
Nov. 1	γ Cancri -	4½	8 34 55·71			N.21 59	
	ξ Cancri -	5½	9 1 3·18			22 38	
	Moon II. L.	- -	8 53 41·10	128·72	67·11	23 2 23·7	—522·4
	Moon II. U.	22·1	9 19 0·11	124·50	65·95	21 10 48·5	591·9
	ε Leonis -	3	9 37 38·81			24 26	
	η Leonis -	3½	9 59 27·03			N.17 28	
2	ε Leonis -	3	9 37 38·84			N.24 26	
	η Leonis -	3½	9 59 27·06			17 28	
	Moon II. L.	- -	9 43 30·48	120·64	64·87	19 6 13·6	—652·5
	Moon II. U.	23·2	10 7 17·25	117·25	63·90	16 50 21·4	704·9
	45 Leonis *	6	10 20 0·78			10 30	
	ρ Leonis *	4	10 25 11·99			N.10 3	
3	45 Leonis *	6	10 20 0·81			N.10 30	
	ρ Leonis *	4	10 25 12·02			10 3	
	Moon II. L.	- -	10 30 26·54	114·40	63·06	14 24 45·7	—749·8
	Moon II. U.	24·2	10 53 5·27	112·16	62·38	11 50 53·	787·7
	σ Leonis *	4	11 13 40·76			6 49	
	τ Leonis -	4	11 20 29·97			N. 3	
4	σ Leonis *	4	11 13 40·78				
	τ Leonis -	4	11 20 30·00				
	Moon II. L.	- -	11 15 20·85	110·55			
	Moon II. U.	25·2	11 37 21·04	109·60			
	b Virginis *	5½	11 52 32·39				
	η Virginis -	3½	12 12 30·21				
5	Moon II. L.	- -	11 59 13·88	109·3			
	Moon II. U.	26·3	12 21 7·48	109·1			
6	Moon II. L.	- -	12 43 10·19	110·8			

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1855.			h m s	s	s	° ′ ″	″
Nov. 6	Moon II. U.	27·3	13 5 30·42	112·65	62·28	S. 5 12 19·5	−877·3
7	Moon II. L.	- -	13 28 16·60	115·17	62·96	S. 8 6 50·8	−866·5
	Moon II. U.	28·3	13 51 37·22	118·38	63·83	10 58 17·6	846·3
8	Moon II. L.	- -	14 15 40·44	122·26	64·89	S. 13 44 41·3	−815·8
	Moon II. U.	29·4	14 40 33·99	126·76	66·10	16 23 50·4	773·6
9	Moon I. L.	- -	15 4 9·81	131·54	67·44	S. 18 53 17·7	−718·7
10	Moon I. U.	0·7	15 31 0·08	136·89	68·86	S. 21 10 23·7	−649·9
	Moon I. L.	- -	15 58 55·78	142·40	70·29	23 12 18·1	566·7
11	Moon I. U.	1·7	16 27 56·96	147·76	71·68	S. 24 56 5·9	−468·8
	Moon I. L.	- -	16 58 0·04	152·64	72·92	26 18 54·6	357·0
12	Moon I. U.	2·8	17 28 56·94	156·67	73·96	S. 27 18 6·7	−233·1
	Moon I. L.	- -	18 0 35·45	159·52	74·68	27 51 30·8	− 99·6
13	Moon I. U.	3·8	18 32 39·77	160·94	75·05	S. 27 57 34·1	+ 39·7
	Moon I. L.	- -	19 4 52·09	160·85	75·06	27 35 32·8	180·5
	ζ Sagittarii	3½	18 53 24·53			30 5	
	τ Sagittarii	4	18 57 54·66			S. 27 53	
14	ζ Sagittarii	3½	18 53 24·52			S. 30 5	
	τ Sagittarii	4	18 57 54·65			27 53	
	Moon I. U.	4·8	19 36 54·57	159·33	74·70	26 45 34·5	+318·4
	Moon I. L.	- -	20 8 31·25	156·61	74·05	25 28 38·5	449·5
	b Sagittarii	5	19 48 4·45			27 33	
	c Sagittarii	4½	19 53 46·02			S. 28 6	
15	*b* Sagittarii	5	19 48 4·44			S. 27 33	
	c Sagittarii	4½	19 53 46·01			28 6	
	Moon I. U.	5·9	20 39 29·77	153·03	73·18	23 46 26·4	+570·6
	Moon I. L.	- -	21 9 42·14	148·98	72·17	21 41 13·9	679·3
	ι Capricorni	5	21 14 12·17			17 27	
	ζ Capricorni	4	21 18 25·17			S. 23 2	
16	ι Capricorni	5	21 14 12·16			S. 17 27	
	ζ Capricorni	4	21 18 25·16			23 2	
	Moon I. U.	6·9	21 39 4·86	144·82	71·12	19 15 38·2	+774·3
	Moon I. L.	- -	22 7 38·52	140·85	70·10	16 32 29·3	854·8
	ι Aquarii -	4½	21 58 38·39			14 34	
	θ Aquarii -	4½	22 9 13·06			S. 8 30	
17	ι Aquarii -	4½	21 58 38·37			S. 14 34	
	θ Aquarii -	4½	22 9 13·05			8 30	
	Moon I. U.	8·0	22 35 27·16	137·35	69·18	13 34 42·1	+920·6
	Moon I. L.	- -	23 2 37·28	134·45	68·40	10 25 12·1	+971·9
	φ Aquarii -	5	23 6 51·31			S. 6 50	

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1855.			h m s	s	s	° ′ ″	″
Nov. 17	ψ^3 Aquarii -	5	23 11 27·59			S. 10 24	
18	φ Aquarii -	5	23 6 51·30			S. 6 50	
	ψ^3 Aquarii -	5	23 11 27·58			10 24	
	Moon I. U.	9·0	23 29 17·02	132·30	67·81	7 6 53·5	+1008·8
	Moon I. L.	- -	23 55 35·83	130·97	67·43	3 42 39·3	1031·2
	30 Piscium -	4½	23 54 34·18			6 49	
	33 Piscium -	5	23 57 57·59			S. 6 31	
19	30 Piscium -	4½	23 54 34·17			S. 6 49	
	33 Piscium -	5	23 57 57·58			6 31	
	Moon I. U.	10·0	0 21 43·57	130·46	67·27	S. 0 15 21·3	+1039·4
	Moon I. L.	- -	0 47 50·28	130·80	67·34	N. 3 12 7·6	1033·1
	ϵ Piscium *	4	0 55 28·31			7 6	
	e Piscium *	5	1 0 57·19			N. 4 53	
20	ϵ Piscium *	4	0 55 28·31			N. 7 6	
	e Piscium *	5	1 0 57·19			4 53	
	Moon I. U.	11·1	1 14 5·83	131·93	67·61	6 36 53·6	+1012·1
	Moon I. L.	- -	1 40 39·45	133·80	68·08	9 55 59·5	976·4
	η Piscium -	4	1 23 46·93			14 36	
	π Piscium *	5	1 29 28·17			N. 11 24	
21	η Piscium -	4	1 23 46·93			N. 14 36	
	π Piscium *	5	1 29 28·17			11 24	
	Moon I. U.	12·1	2 7 39·41	136·30	68·72	13 6 26·5	+ 925·6
	Moon I. L.	- -	2 35 12·47	139·28	69·47	16 5 14·6	859·9
	π Arietis -	5	2 41 15·88			16 52	
	ϵ Arietis -	5	2 50 59·24			N. 20 45	
22	π Arietis -	5	2 41 15·89			N. 16 52	
	ϵ Arietis -	5	2 50 59·25			20 45	
	Moon I. U.	13·1	3 3 23·33	142·56	70·30	18 49 26·0	+ 779·6
	Moon I. L.	- -	3 32 13·97	145·87	71·14	21 16 10·4	685·5
	η Tauri - -	3	3 38 56·06			23 39	
	A^1 Tauri - -	5	3 56 11·46			N. 21 41	
23	η Tauri - -	3	3 38 56·07			N. [illegible] 39	
	A^1 Tauri - -	5	3 56 11·48			[illegible] 41	
	Moon II. U.	14·2	4 4 6·92	149·04	71·91	[illegible] 49·6	+ 579·1
	ι Aurigæ -	4	4 47 37·52				
	ι Tauri - -	4½	4 54 29·75				
24	ι Aurigæ -	4	4 47 37·[illegible]				
	ι Tauri - -	4½	4 54 29·[illegible]				
	Moon II. L.	- -	4 34 [illegible]	[illegible]49	72·[illegible]	[illegible]	+ 462·4
	Moon II. U.	15·2	5 4 [illegible]	[illegible]55	72·[illegible]	[illegible]	+ 338·3
	o Tauri - -	5	5 18 [illegible]				
	ζ Tauri - -	3½	5 29 [illegible]				

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1855.			h m s	s	s	° ′ ″	
Nov.25	*o* Tauri - -	5	5 18 59·50			N.21 49	
	ζ Tauri - -	3½	5 29 2·76			21 3	
	Moon II. L. - -		5 35 19·69	153·51	73·12	27 22 10·4	+21
	Moon II. U.	16·3	6 5 58·46	152·73	72·97	27 51 20·0	+ 8
	μ Geminor.	3	6 14 15·11			22 35	
	ν Geminor.	4	6 20 24·93			N.20 18	
26	μ Geminor.	3	6 14 15·14			N.22 35	
	ν Geminor.	4	6 20 24·96			20 18	
	Moon II. L. - -		6 36 20·45	150·73	72·52	27 55 2·5	— 4
	Moon II. U.	17·3	7 6 11·65	147·64	71·79	27 34 16·0	16
	α^2 Geminor.	1½	7 25 24·45			32 12	
	β Geminor.	1½	7 36 29·95			N.28 22	
27	α^2 Geminor.	1½	7 25 24·48			N.32 12	
	β Geminor.	1½	7 36 29·98			28 22	
	Moon II. L. - -		7 35 20·30	143·68	70·83	26 50 31·2	—27
	Moon II. U.	18·3	8 3 37·77	139·16	69·71	25 45 42·5	37
	θ Cancri -	5½	8 23 22·67			18 35	
	γ Cancri -	4½	8 34 56·62			N.21 59	
28	θ Cancri -	5½	8 23 22·70			N.18 35	
	γ Cancri -	4½	8 34 56·65			21 59	
	Moon II. L. - -		8 30 59·05	134·37	68·49	24 21 57·6	—462
	Moon II. U.	19·4	8 57 22·47	129·56	67·24	22 41 28·0	540
	λ Leonis -	4½	9 23 29·49			23 36	
	ε Leonis -	3	9 37 39·76			N.24 26	
29	λ Leonis -	4½	9 23 29·53			N.23 36	
	ε Leonis -	3	9 37 39·79			24 26	
	Moon II. L. - -		9 22 49·40	124·98	66·03	20 46 22·6	—608
	Moon II. U.	20·4	9 47 23·57	120·79	64·88	18 38 42·3	666
	α Leonis *	1½	10 0 42·31			12 40	
	γ Leonis -	2	10 12 1·08			N.20 34	
30	α Leonis *	1½	10 0 42·34			N.12 40	
	γ Leonis -	2	10 12 1·11			20 34	
	Moon II. L. - -		10 11 10·48	117·12	63·87	16 20 17·1	—716
	Moon II. U.	21·4	10 34 16·86	114·05	63·00	13 52 47·6	757
	c Leonis *	5½	10 53 15·97			6 53	
	χ Leonis *	4½	10 57 34·34			N. 8 7	
Dec. 1	*c* Leonis *	5½	10 53 16·00			N. 6 53	
	χ Leonis *	4½	10 57 34·37			8 7	
	Moon II. L. - -		10 56 50·27	111·63	62·29	11 17 43·4	—792
	Moon II. U.	22·5	11 18 58·82	109·91	61·78	8 36 24·9	—820
	ν Virginis *	4½	11 38 26·41			7 20	
	β Virginis -	3½	11 43 10·47			N. 2 35	
2	ν Virginis *	4½	11 38 26·45			N. 7 20	

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1855.			h m s	s	s	° ′ ″	″
Dec. 2	β Virginis -	3½	11 43 10·50			N. 2 35	
	Moon II. L.	- -	11 40 50·92	108·90	61·46	5 50 7·7	−841·9
	Moon II. U.	23·5	12 2 35·30	108·62	61·36	3 0 3·2	857·9
	η Virginis -	3½	12 12 30·98			N. 0 8	
	γ Virginis -	4	12 34 20·50			S. 0 39	
3	η Virginis -	3½	12 12 31·01			N. 0 8	
	γ Virginis -	4	12 34 20·53			S. 0 39	
	Moon II. L.	- -	12 24 20·77	109·09	61·46	N. 0 7 22·0	−868·0
	Moon II. U.	24·5	12 46 16·41	110·32	61·77	S. 2 46 42·7	871·7
	θ Virginis -	4½	13 2 28·22			4 46	
	α Virginis -	1	13 17 34·90			S. 10 24	
4	θ Virginis -	4½	13 2 28·26			S. 4 46	
	α Virginis -	1	13 17 34·93			10 24	
	Moon II. L.	- -	13 8 31·42	112·32	62·31	5 40 52·2	−868·7
	Moon II. U.	25·6	13 31 15·10	115·10	63·05	8 33 39·2	857·8
	κ Virginis -	4	14 5 11·26			9 36	
	λ Virginis -	4	14 11 17·43			S. 12 42	
5	Moon II. L.	- -	13 54 36·81	118·65	64·01	S. 11 23 24·7	−838·2
	Moon II. U.	26·6	14 18 45·80	122·97	65·16	14 8 13·8	808·2
6	Moon II. L.	- -	14 43 50·76	127·98	66·48	S. 16 45 55·1	−766·6
	Moon II. U.	27·6	15 9 59·50	133·58	67·94	19 13 58·1	711·6
7	Moon II. L.	- -	15 37 18·12	139·58	69·48	S. 21 29 33·5	−641·7
	Moon II. U.	28·7	16 5 50·08	145·75	71·04	23 29 36·0	555·9
8	Moon II. L.	- -	16 35 35·26	151·72	72·54	S. 25 10 51·1	−453·8
9	Moon I. U.	0·0	17 4 1·09	156·87	73·86	S. 26 30 5·8	−336·0
	Moon I. L.	- -	17 35 50·80	161·20	74·93	27 24 21·6	204·5
10	Moon I. U.	1·1	18 8 24·23	164·09	75·63	S. 27 51 14·3	− 62·8
	Moon I. L.	- -	18 41 22·16	165·25	75·93	27 49 7·6	+ 84·5
11	Moon I. U.	2·1	19 14 23·24	164·62	75·80	S. 27 17 25·5	+232·0
	Moon I. L.	- -	19 47 6·60	162·35	75·28	26 16 39·0	374·4
12	Moon I. U.	3·2	20 19 14·30	158·75	74·44	S. 24 48 18·8	+506·9
	Moon I. L.	- -	20 50 33·10	154·27	73·37	22 54 45·5	626·1
13	υ Capricorni	5	20 31 49·12			S. 18	
	17 Capricorni	6	20 37 47·17			22	
	Moon I. U.	4·2	21 20 55·13	149·38	72·17	20	
	Moon I. L.	- -	21 50 18·00	144·47	70·96	18	
	γ Capricorni	4	21 32 5·08			17	
	δ Capricorni	3½	21 39 3·92			S. 16	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. (☾'s in 1 of L
1855.			h m s	s	s	° ′ ″	
Dec. 14	γ Capricorni	4	21 32 5·07			S. 17 19	
	δ Capricorni	3½	21 39 3·91			16 47	
	Moon I. U.	5·2	22 18 43·65	139·89	69·82	15 13 12·7	+ 8
	Moon I. L.	- -	22 46 17·57	135·88	68·79	12 9 59·0	9
	τ³ Aquarii -	5½	22 41 56·91			14 21	
	δ Aquarii -	3	22 46 59·24			S. 16 35	
15	τ³ Aquarii -	5½	22 41 56·90			S. 14 21	
	δ Aquarii -	3	22 46 59·23			16 35	
	Moon I. U.	6·3	23 13 7·68	132·61	67·94	8 57 23·0	+ 9
	Moon I. L.	- -	23 39 23·43	130·17	67·30	5 38 22·5	10
	30 Piscium -	4½	23 54 33·92			6 49	
	33 Piscium -	5	23 57 57·33			S. 6 31	
16	30 Piscium -	4½	23 54 33·91			S. 6 49	
	33 Piscium -	5	23 57 57·32			6 31	
	Moon I. U.	7·3	0 5 15·15	128·60	66·89	S. 2 15 45·6	+10
	Moon I. L.	- -	0 30 53·52	127·94	66·71	N. 1 7 47·1	10
	12 Ceti - -	6	0 22 40·96			S. 4 46	
	13 Ceti - -	6	0 27 49·82			S. 4 24	
17	12 Ceti - -	6	0 22 40·95			S. 4 46	
	13 Ceti - -	6	0 27 49·81			S. 4 24	
	Moon I. U.	8·3	0 56 29·21	128·15	66·75	N. 4 29 40·7	+100
	Moon I. L.	- -	1 22 12·53	129·20	67·02	7 47 23·3	97
	μ Piscium *	4½	1 22 38·39			5 24	
	π Piscium *	5	1 29 28·04			N. 11 24	
18	μ Piscium *	4½	1 22 38·38			N. 5 24	
	π Piscium *	5	1 29 28·03			11 24	
	Moon I. U.	9·4	1 48 13·15	131·03	67·48	10 58 23·1	+ 93
	Moon I. L.	- -	2 14 39·77	133·52	68·12	14 0 7·5	88
	ξ² Ceti - - *	4	2 20 30·54			7 48	
	31 Arietis *	5½	2 28 47·15			N. 11 49	
19	ξ² Ceti - - *	4	2 20 30·54			N. 7 48	
	31 Arietis *	5½	2 28 47·14			11 49	
	Moon I. U.	10·4	2 41 39·59	136·53	68·87	16 50 1·7	+ 81
	Moon I. L.	- -	3 9 17·90	139·89	69·71	19 25 31·0	73
	δ Arietis -	4	3 3 24·31			19 10	
	τ¹ Arietis -	5	3 12 55·40			N. 20 37	
20	δ Arietis -	4	3 3 24·31			N. 19 10	
	τ¹ Arietis -	5	3 12 55·40			20 37	
	Moon I. U.	11·4	3 37 37·39	143·35	70·56	21 44 3·3	+ 64
	Moon I. L.	- -	4 6 37·57	146·62	71·36	23 43 14·0	+ 54
	δ¹ Tauri - -	4	4 14 38·56			17 12	
	ε Tauri - -	3½	4 20 13·28			N. 18 51	
21	δ¹ Tauri - -	4	4 14 38·56			N. 17 12	

Date.	Name.	Mag-nitude.	At Greenwich Transit. Apparent Right Ascension *in Time.*	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dec. in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Dec. 21	ε Tauri - -	3½	4 20 13·29			N.18 51	
	Moon I. U.	12·5	4 36 14·26	149·38	72·03	25 20 52·8	+431·2
	Moon I. L.	- -	5 6 19·57	151·34	72·49	26 35 13·3	311·1
	β Tauri - -	2	5 17 12·22			28 29	
	ζ Tauri - -	3½	5 29 3·18			N.21 3	
22	β Tauri - -	2	5 17 12·23			N.28 29	
	ζ Tauri - -	3½	5 29 3·19			21 3	
	Moon I. U.	13·5	5 36 42·22	152·23	72·70	27 25 0·3	+186·2
	η Geminor.	4	6 6 11·87			22 33	
	μ Geminor.	3	6 14 15·67			N.22 35	
23	η Geminor.	4	6 6 11·88			N.22 33	
	μ Geminor.	3	6 14 15·68			22 35	
	Moon II. L.	- -	6 9 33·56	151·86	72·61	27 49 37·8	+ 60·1
	Moon II. U.	14·5	6 39 47·34	150·23	72·21	27 49 11·5	− 63·8
	δ Geminor.	3½	7 11 31·98			22 15	
	α^2 Geminor.	1½	7 25 25·22			N.32 12	
24	δ Geminor.	3½	7 11 32·00			N.22 15	
	α^2 Geminor.	1½	7 25 25·25			32 12	
	Moon II. L.	- -	7 9 34·45	147·44	71·54	27 24 28·8	−182·1
	Moon II. U.	15·6	7 38 42·23	143·72	70·62	26 36 52·2	292·4
	6 Cancri -	5½	7 54 40·75			28 12	
	ψ^3 Cancri -	4	8 1 47·21			N.25 57	
25	6 Cancri -	5½	7 54 40·78			N.28 12	
	ψ^3 Cancri -	4	8 1 47·24			25 57	
	Moon II. L.	- -	8 7 1·11	139·34	69·53	25 28 12·0	−392·5
	Moon II. U.	16·6	8 34 24·98	134·61	68·33	24 0 36·0	481·6
	ρ^3 Cancri -	6	8 47 2·31			28 29	
	ξ Cancri -	5½	9 1 5·02			N.22 38	
26	ρ^3 Cancri -	6	8 47 2·34			N.28 29	
	ξ Cancri -	5½	9 1 5·05			22 38	
	Moon II. L.	- -	9 0 51·35	129·80	67·10	22 16 19·4	−559·3
	Moon II. U.	17·7	9 26 20·78	125·15	65·88	20 17 36·5	626·0
	ν Leonis *	5½	9 50 28·66			13 8	
	η Leonis -	3½	9 59 28·90			N.17 28	
27	ν Leonis *	5½	9 50 28·70			N.13 8	
	η Leonis -	3½	9 59 28·93			17 28	
	Moon II. L.	- -	9 50 56·38	120·86	64·74	18 6	
	Moon II. U.	18·7	10 14 43·30	117·05	63·72	15	
	ρ Leonis *	4	10 25 13·80			10	
	37 Sextantis*	6	10 38 35·78			N. 7	
28	ρ Leonis *	4	10 25 13·84			N.10	
	37 Sextantis*	6	10 38 35·82				
	Moon II. L.	- -	10 37 47·98	113·83	62·83	N.1	

Date.	Name.	Magnitude.	At Greenwich Transit. Apparent Right Ascension in Time.	Var. of ☾'s R.A. in 1 hour of Long.	Sidereal Time of ☾'s Sem. pas. mer.	Declination.	Var. of ☾'s Dn in 1 hour of Long.
1855.			h m s	s	s	° ′ ″	″
Dec. 28	Moon II. U.	19·7	11 0 17·84	111·25	62·12	N.10 38 36·4	−798·1
	σ Leonis *	4	11 13 42·53			6 49	
	τ Leonis -	4	11 20 31·73			N. 3 39	
29	σ Leonis *	4	11 13 42·56			N. 6 49	
	τ Leonis -	4	11 20 31·76			3 39	
	Moon II. L.	- -	11 22 20·87	109·37	61·59	7 56 19·7	−822·9
	Moon II. U.	20·8	11 44 5·54	108·20	61·26	5 9 51·7	840·8
	ε Virginis *	4½	11 57 52·17			9 32	
	η Virginis -	3½	12 12 31·89			N. 0 8	
30	ε Virginis *	4½	11 57 52·20			N. 9 32	
	η Virginis -	3½	12 12 31·92			0 8	
	Moon II. L.	- -	12 5 40·55	107·76	61·13	N. 2 20 24·7	−852·8
	Moon II. U.	21·8	12 27 14·86	108·09	61·22	S. 0 30 51·4	859·0
	γ Virginis -	4	12 34 21·43			0 39	
	θ Virginis -	4½	13 2 29·11			S. 4 46	
31	γ Virginis -	4	12 34 21·46			S. 0 39	
	θ Virginis -	4½	13 2 29·14			4 46	
	Moon II. L.	- -	12 48 57·71	109·18	61·53	3 22 47·7	−859·4
	Moon II. U.	22·8	13 10 58·45	111·07	62·07	6 14 11·2	−853·5
	α Virginis -	1	13 17 35·82			S. 10 24	
	ζ Virginis -	4	13 27 20·80			N. 0 9	

ECLIPSES OF THE SUN AND MOON.

In the Year 1855 there will be two Eclipses of the Sun, and two of the Moon.

I.—*A Total Eclipse of the MOON, May* 1, 1855, *partly visible at Greenwich.*

	h	m	
First contact with the Penumbra at -	13	11·6	Mean Time at Greenwich.
First contact with the Shadow - - -	14	14·1	
Disappearance - - - - - - - - -	15	16·7	
Middle of the Eclipse - - - - - -	16	4·8	
Reappearance - - - - - - - - -	16	52·9	
Last contact with the Shadow - - -	17	55·5	
Last contact with the Penumbra - -	18	58·0	

At these times respectively the Moon will be in the Zenith of the places whose positions are,

Longitude	°	′		Latitude	°	′	
	20	0	W. of Greenwich.		14	30	S.
	35	8			14	44	
	50	16			14	58	
	61	54			15	9	
	73	32			15	19	
	88	41			15	33	
	103	48			15	47	S.

Magnitude of the Eclipse (Moon's diameter = 1) 1·549, on the Southern limb.

The first contact with the Shadow occurs at 123° from the Northernmost point of the Moon's limb towards the East.
The last contact at 75° towards the West.

At Greenwich the Moon will set totally eclipsed.

II.—*A Partial Eclipse of the SUN, May* 15, 1855, *in* [illegible] *eenwich.*

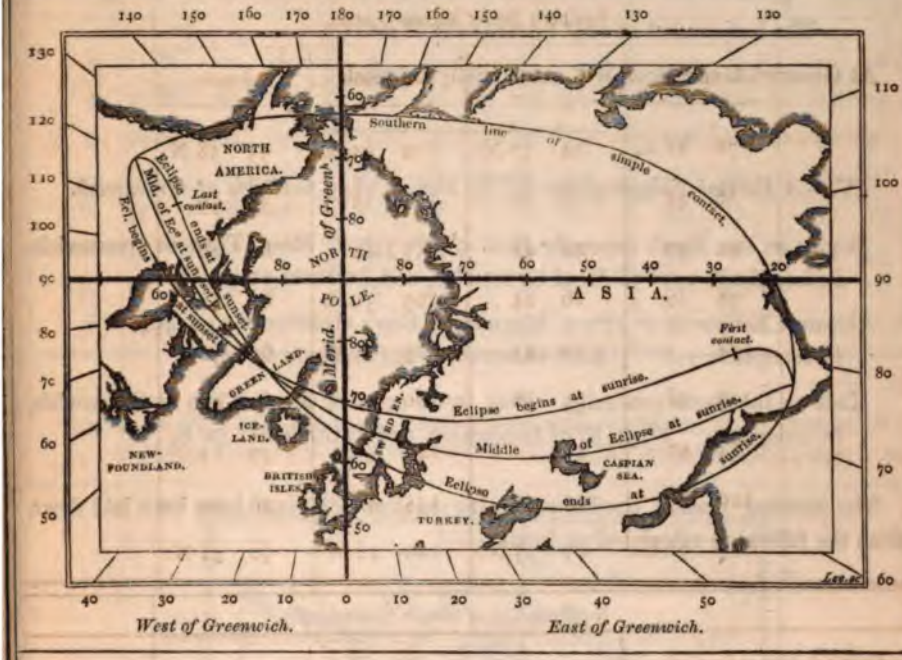
Begins on the Earth generally May 15^d 12^h 2^m·[illegible] Greenwich,
in Longitude 78° 56′ E. of Greenwich, and Lat
Greatest Eclipse at 14^h 1^m·1, Magnitude (Sun's
in Longitude 16° 27′ E. of Greenwich, and L
Ends on the Earth generally May 15^d 15^h 59
in Longitude 114° 25′ W. of Greenwich, and

The limiting lines of the Eclipse, in the annexed diagram, have been laid do from the following calculated positions :—

Southern line of Simple Contact.			
Longitude.	Latitude.	Longitude.	Latitude.
° ′	° ′	° ′	° ′
76 21 E.	14 37 N.	134 54 E.	53 58 N.
86 44	19 10	144 19	57 39
92 57	22 42	155 44	60 29
98 26	26 24	169 30 E.	62 12
104 1	30 45	175 42 W.	62 31
109 18	35 46	160 41	61 23
114 40	40 0	147 51	59 15
120 13	44 39	135 41	56 12
126 31 E.	49 15 N.	119 22 W.	50 42 N.

Eclipse begins at Sun-set.		Eclipse ends at Sun-rise.			
Longitude.	Latitude.	Longitude.	Latitude.	Longitude.	Latitud
° ′	° ′	° ′	° ′	° ′	°
121 30 W.	51 38 N.	40 23 W.	70 43 N.	53 48 E.	29 5
118 31	50 30	16 22 W.	67 47	58 14	25 15
114 1	51 52	1 10 E.	63 15	62 43	21 36
108 14	54 3	13 27	58 19	67 14	18 22
101 32	56 51	22 38	53 25	71 39	15 55
93 59	59 54	29 50	48 46	75 34 E.	14 47
85 27	62 54	35 39	44 30		
75 56	65 38	40 26	41 5		
62 9	68 32	44 25	37 45		
50 42 W.	70 0 N.	49 30 E.	32 53 N.		

PATH OF THE MOON'S PENUMBRA UPON THE SURFACE OF THE EARTH, DURING THE PARTIAL ECLIPSE OF THE SUN, MAY 15, 1855.



III.—*A Total Eclipse of the MOON, Oct.* 24, 1855, *partly visible at Greenwich.*

	h	m
First contact with the Penumbra at -	16	45·4
First contact with the Shadow - - -	17	43·7
Disappearance - - - - - - - - -	18	44·8
Middle of the Eclipse - - - - - -	19	29·1
Reappearance - - - - - - - - -	20	13·4
Last contact with the Shadow - - -	21	14·5
Last contact with the Penumbra - -	22	12·8

} Mean Time at Greenwich.

At these times respectively the Moon will be in the ' places whose positions are,

	°	′	
Longitude	76	36	W. of G
	90	40	
	105	25	
	116	7	
	126	49	
	141	34	
	155	38	

Magnitude of the Eclipse (Moon's diameter = 1) 1·464 on the Northern limb

The first contact with the Shadow occurs at 52° from the Northern point of the Moon's limb towards the East.

The last contact at 104° towards the West.

At Greenwich the Moon will set partially eclipsed.

IV.—*A Partial Eclipse of the SUN, Nov.* 9, 1855, *invisible at Greenwich.*

Begins on the Earth generally Nov. $9^d\ 5^h\ 35^m{\cdot}1$, Mean Time at Greenw in Longitude 171° 38′ E. of Greenwich, and Latitude 31° 21′ S.

Greatest Eclipse at $7^h\ 17^m{\cdot}0$, Magnitude (Sun's diameter = 1) 0·494. in Longitude 121° 5′ E. of Greenwich, and Latitude 62° 37′ S.

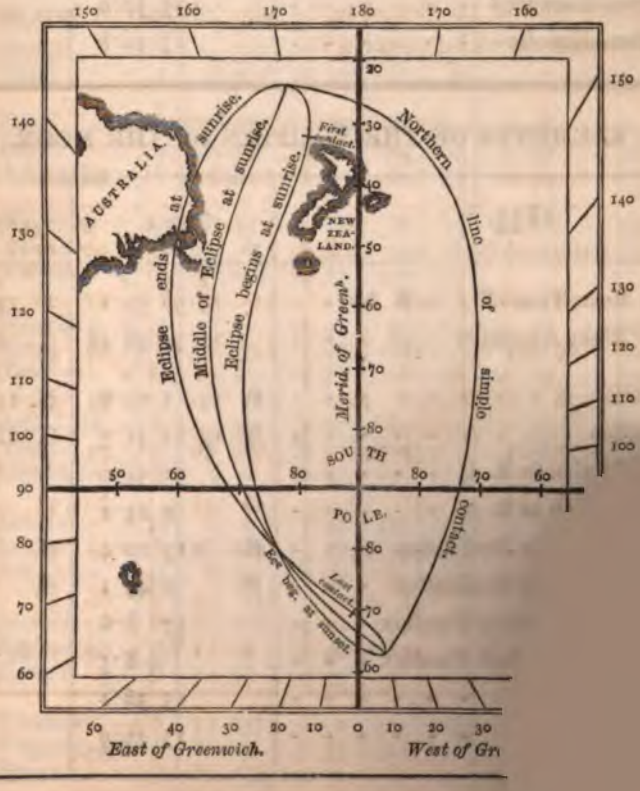
Ends on the Earth generally Nov. $9^d\ 8^h\ 59^m{\cdot}0$, Mean Time at Greenw in Longitude 2° 34′ E. of Greenwich, and Latitude 68° 52′ S.

The limiting lines of the Eclipse in the annexed diagram have been laid do from the following calculated positions :—

Northern line of Simple Contact.			
Longitude.	Latitude.	Longitude.	Latitude.
° ′	° ′	° ′	° ′
169 26 E.	22 28 S.	138 39 W.	60 17 S.
176 26 E.	25 10	128 26	65 26
179 47 W.	26 57	113 33	69 51
176 6	28 59	91 0	72 52
170 23	32 44	61 56	73 2
163 55	38 0	40 44	70 53
158 14	43 25	30 8	68 53
152 49	48 48	21 11	66 37
146 51 W.	54 17 S.	8 1 W.	62 18 S.

Eclipse begins at Sun-set.				Eclipse ends at Sun-rise.							
Longitude.		Latitude.		Longitude.		Latitude.		Longitude.		Latitude.	
°	′	°	′	°	′	°	′	°	′	°	′
7	11 W.	62	26 S.	53	22 E.	73	1 S.	139	32 E.	42	18 S.
2	54 W.	63	9	79	45	70	21	143	24	39	23
2	58 E.	64	37	97	10	66	15	146	47	36	35
9	54	66	23	109	31	61	37	150	24	33	37
18	34	68	23	118	16	57	14	154	11	30	39
28	30	70	13	125	32	52	50	158	6	27	43
39	16	71	40	131	17	48	50	161	46	25	22
50	14 E.	72	37 S.	135	58 E.	45	19 S.	165	26 E.	23	31 S.

PATH OF THE MOON'S PENUMBRA UPON THE SURFACE OF THE EARTH, DURING THE PARTIAL ECLIPSE OF THE SUN, NOVEMBER 9, 1855.



ELEMENTS OF THE ECLIPSES OF THE SUN.

1855.	May 15.	November 9.
	h m s	h m s
Greenwich Mean Time of ☌ in R. A. - -	14 45 50·2	8 15 40·4
☉ and ☾'s Right Ascension - - - - - -	3 29 7·57	14 57 42·79
	° ′ ″	° ′ ″
☾'s Declination - - - - - - - - - -	N. 20 5 3·6	S. 18 11 12·2
☉'s Declination - - - - - - - - - -	N. 18 56 49·1	S. 16 53 55·4
☾'s Horary Motion in R. A. - - - - - -	33 20·9	31 29·4
☉'s Horary Motion in R. A. - - - - - -	2 28·2	2 31·4
☾'s Horary Motion in Declination - - -	N. 10 56·2	S. 11 52·2
☉'s Horary Motion in Declination - - -	N. 0 35·2	S. 0 42·9
☾'s Equatorial Horizontal Parallax - - -	57 11·6	56 17·2
☉'s Equatorial Horizontal Parallax - - -	8·5	8·7
☾'s True Semidiameter - - - - - - - -	15 37·0	15 22·1
☉'s True Semidiameter - - - - - - - -	15 50·8	16 11·6

ELEMENTS OF THE ECLIPSES OF THE MOON.

1855.	May 1.	October 24.
	h m s	h m s
Greenwich Mean Time of ☍ in R. A. - -	15 56 55·1	19 17 55·6
☉ and ☾'s Right Ascension - - - - - -	14 34 56·28	1 56 42·88
	° ′ ″	° ′ ″
☾'s Declination - - - - - - - - - -	S. 15 1 25·6	N. 11 42 24·3
☉'s Declination - - - - - - - - - -	N. 15 11 32·3	S. 11 56 48·0
☾'s Horary Motion in R. A. - - - - - -	31 34·0	33 22·1
☉'s Horary Motion in R. A. - - - - - -	2 23·2	2 23·5
☾'s Horary Motion in Declination - - -	S. 13 10·4	N. 15 40·1
☉'s Horary Motion in Declination - - -	N. 0 45·1	S. 0 52·0
☾'s Equatorial Horizontal Parallax - - -	57 8·6	59 44·9
☉'s Equatorial Horizontal Parallax - - -	8·5	8·6
☾'s True Semidiameter - - - - - - - -	15 36·1	16 18·8
☉'s True Semidiameter - - - - - - - -	15 53·9	16 7·9

OCCULTATIONS OF PLANETS AND FIXED STARS BY THE MOON,

VISIBLE AT GREENWICH.

Day of the Month.	Star's Name.	Magnitude.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from N. Point.	Angle from Vertex.	Sidereal Time.	Mean Time.	Angle from N. Point.	Angle from Vertex.
			h m	h m	°	°	h m	h m	°	°
Jan. 1	139 Tauri	5½	9 42	14 57	78	122	10 48	16 3	278	321
4	λ Cancri	6	0 44	5 48	157	122	1 2	6 7	196	159
6	η Leonis	3½	5 17	10 14	120	80	6 4	11 1	203	164
12	δ Libræ	6	11 18†	15 50	149	119				
12	α^2 Libræ	2½	11 27†	15 58	149	120				
25	σ Arietis	6	0 54	4 36	81	57	1 51	5 33	343	330
28	125 Tauri	6	9 11	12 40	121	164	10 10	13 39	239	283
31	λ Cancri	6	10 2	13 19	104	134	11 4	14 21	216	255
Feb. 6	*k* Virginis	6	11 51	14 45	102	90	12 43	15 36	184	182
7	*m* Virginis	5½	9 51†	12 41	147	115				
10	19 Scorpii	5½	13 32†	16 9	336	312				
23	υ^1 Tauri	5	8 36†	10 23	10	52				
23	υ^2 Tauri	6	8 42	10 29	68	110	9 38	11 25	310	352
Mar. 2	42 Leonis	6	4 52	6 12	60	20	5 56	7 16	262	223
2	B.A.C. 3579	6	9 22	10 41	86	71	10 34	11 53	212	215
4	*b* Virginis	5½	10 42	11 54	88	73	11 47	12 58	199	198
5	γ Virginis	4	9 13	10 20	133	102	9 29	10 36	159	129
7	λ Virginis	4	13 23†	14 22	146	137				
9	δ Scorpii	3	12 0	12 51	94	61	12 58	13 49	214	188
2	A^1 Tauri	5	8 57	8 58	128	170	9 52	9 52	254	295
22	A^2 Tauri	6	9 10	9 11	106	148	10 9	10 10	275	316
23	B.A.C. 1518	6	7 50	7 47	14	53	7 57	7 54	2	42
23	*k* Tauri	6	8 32	8 29	133	176	9 26	9 23	[illegible]	281
26	*c* Geminorum	6	9 52	9 37	103	139	10 57	10 42		7
29	η Leonis	3½	6 8	5 42	113	75	7 2	6		
29	42 Leonis	6	16 16†	15 48	154	194				
Apr. 2	θ Virginis	4½	8 54	8 11	21	347	9 46			
6	25 Scorpii	6	16 11†	15 12	162	158				
7	3 Sagittarii	5	15 49	14 46	87	71	17 5			
23	λ Cancri	6	12 59	10 53	53	96	13 57			
28	10 Virginis	6	11 27†	9 2	323	316				
29	38 Virginis	6	10 24	7 55	342	318	10			
May 3	19 Scorpii	5½	12 25§	9 40	87	55	13			

OCCULTATIONS OF PLANETS AND FIXED STARS BY THE MOON,

VISIBLE AT GREENWICH.

Day of the Month.	Star's Name.	Magnitude.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from N. Point.	Angle from Vertex.	Sidereal Time.	Mean Time	Angle from N. Point.	Angle from Vertex.
			h m	h m	°	°	h m	h m	°	°
May 3	22 Scorpii - -	6	17 44	14 58	66	80	18 58	16 12	264	287
23	B.A.C. 3579 -	6	15 25†	11 21	152	192	- -			
June 1	B.A.C. 6127 -	5	17 13	12 33	29	22	17 56	13 16	319	319
27	22 Scorpii - -	6	14 45	8 23	48	33	15 54	9 32	269	265
30	ω Sagittarii -	5½	20 32†	13 57	193	200				
30	A Sagittarii -	5½	22 6†	15 32	196	217				
July 1	B.A.C. 7237 -	6	16 22‡	9 44	106	71	17 27	10 49	277	248
9	A^1 Tauri - - -	5	22 15	15 5	191	149	22 27	15 17	215	173
9	A^2 Tauri - - -	6	22 8	14 58	144	103	22 58	15 48	262	220
10	B.A.C. 1518 -	6	20 49	13 35	113	80	21 39	14 26	278	241
10	k Tauri - - -	6	22 7†	14 53	197	158				
19	10 Virginis - -	6	18 9†	10 20	153	192				
23	ι^1 Libræ - -	5½	17 30	9 26	61	83	18 43	10 38	256	287
26	B.A.C. 6127 -	5	16 20	8 4	44	29	17 18	9 2	300	294
27	B.A.C. 6628 -	6	21 6	12 45	49	65	21 47	13 26	336	359
28	B.A.C. 7077 -	6	22 3	13 38	88	103	23 4	14 39	315	339
29	35 Capricorni -	6	17 37	9 9	129	98	18 38	10 11	266	242
Aug. 7	125 Tauri - - -	6	23 24†	14 20	14	332				
25	B.A.C. 7237 -	6	16 53‡	6 39	110	78	17 58	7 44	275	250
30	o Piscium - -	5	23 7	12 32	120	92	0 15	13 40	310	293
Sept. 5	47 Geminorum	6	23 24†	12 25	183	148				
20	B.A.C. 6628 -	6	19 0	7 4	128	126	20 7	8 11	249	257
21	B.A.C. 7077 -	6	21 51	9 51	131	145	22 57	10 56	272	295
22	35 Capricorni -	6	18 28	6 24	159	134	19 13	7 9	240	221
28	53 Arietis - -	6	23 35	11 7	71	34	0 19	11 50	349	316
30	k Tauri - - -	6	23 0†	10 24	18	336				
Oct. 3	c Geminorum	6	22 16‡	9 28	100	76	23 5	10 17	257	227
3	ω^1 Cancri - -	6	6 11	17 22	64	34	7 32	18 42	274	267
6	42 Leonis - -	6	3 22	14 22	108	70	4 11	15 10	216	177
24	o Piscium - -	5	23 57	9 46	80	60	0 45	10 34	351	340
31	λ Cancri - -	6	0 44†	10 5	355	320				
31	υ^3 Cancri - -	6	5 34	14 55	101	62	6 48	16 8	234	206
Nov. 1	B.A.C. 3138 -	6	1 52†	11 10	170	133				

OCCULTATIONS OF PLANETS AND FIXED STARS BY THE MOON,

VISIBLE AT GREENWICH.

Day of the Month.	Star's Name.	Magnitude.	Disappearance.				Reappearance.			
			Sidereal Time.	Mean Time.	Angle from N. Point.	Angle from Vertex.	Sidereal Time.	Mean Time.	Angle from N. Point.	Angle from Vertex.
			h m	h m	°	°	h m	h m	°	°
Nov. 15	B.A.C. 7237 -	6	22 16	6 39	121	135	23 26	7 49	288	312
22	53 Arietis - -	6	23 25	7 20	66	28	0 3	7 58	355	320
24	k Tauri - - -	6	21 53	5 41	48	11	22 20	6 8	345	306
26	47 Geminorum	6	5 4	12 43	54	19	6 10	13 48	302	284
27	ω^1 Cancri - -	6	1 53	9 28	112	70	2 49	10 24	243	199
Dec. 12	B.A.C. 7077 -	6	21 48	4 25	116	130	22 58	5 35	288	311
14	56 Aquarii - -	6	0 22†	6 51	213	232				
15	ψ^1 Aquarii - -	5	20 42	3 8	104	81	21 50	4 15	322	308
20	32 Tauri - - -	6	8 26	14 30	122	164	9 24	15 27	261	303
24	c Geminorum	6	5 55	11 43	36	6	6 50	12 38	308	293

† A near approach.
§ Star rising.
‡ Star below the horizon.

JUPITER'S SATELLITES.

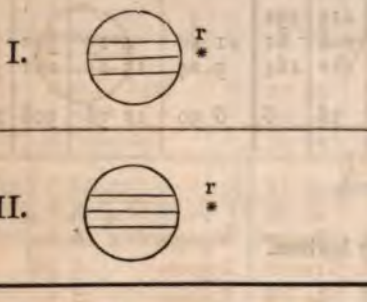
MEAN TIME.

JANUARY.

			d	h	m	s
III.	Transit	Ingress	1	1	43	
III.	Shadow	Ingress		3	43	
III.	Transit	Egress †		5	21	
III.	Shadow	Egress		7	23	
II.	Transit	Ingress		8	25	
II.	Shadow	Ingress		9	25	
II.	Transit	Egress		11	19	
I.	Occult.	Disapp.		11	43	
II.	Shadow	Egress		12	20	

			d	h	m	
I.	Eclipse	Reapp.	1	14	30	
I.	Transit	Ingress	2	8	56	
I.	Shadow	Ingress		9	24	
I.	Transit	Egress		11	16	
I.	Shadow	Egress		11	45	
II.	Occult.	Disapp.	3	2	56	
I.	Occult.	Disapp.		6	14	
II.	Eclipse	Reapp.		6	45	27·7
I.	Eclipse	Reapp.		8	58	45·8

Phases of the Eclipses of the Satellites for an inverting Telescope.



THE SATELLITES OF JUPITER
ARE INVISIBLE FROM THE 3RD DAY OF JANUARY UNTIL THE 24TH DAY OF FEBRUARY
JUPITER BEING TOO NEAR TO THE SUN.

FEBRUARY.

			d	h	m	s
III.	Occult.	Reapp.	24	3	5	
I.	Shadow	Ingress		11	46	
I.	Transit	Ingress		12	14	
I.	Shadow	Egress		14	7	
I.	Transit	Egress		14	34	
I.	Eclipse	Disapp.	25	9	0	35·0
II.	Eclipse	Disapp.		11	35	16·4
I.	Occult.	Reapp.		11	47	
II.	Occult.	Reapp.		15	28	
I.	Shadow	Ingress	26	6	15	
I.	Transit	Ingress		6	44	
I.	Shadow	Egress		8	35	

			d	h	m	
I.	Transit	Egress	26	9	4	
I.	Eclipse	Disapp.	27	3	29	4
II.	Shadow	Ingress		6	2	
I.	Occult.	Reapp.		6	17	
II.	Transit	Ingress		7	3	
II.	Shadow	Egress		8	58	
II.	Transit	Egress		9	59	
III.	Shadow	Ingress		11	46	
III.	Transit	Ingress		13	49	
III.	Shadow	Egress		15	28	
III.	Transit	Egress		17	31	
I.	Shadow	Ingress	28	0	44	

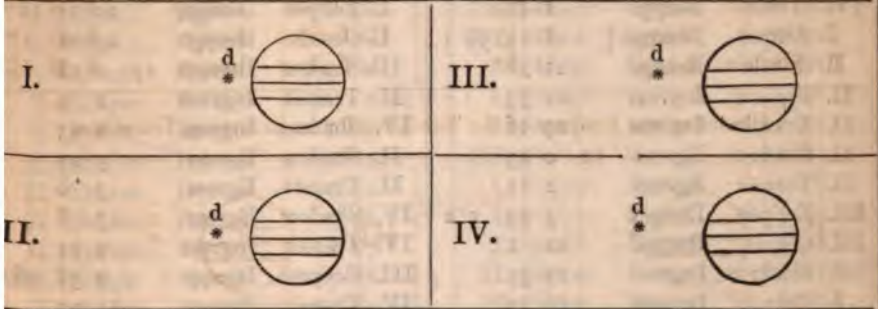
JUPITER'S SATELLITES.

MEAN TIME.

FEBRUARY.

			d	h	m	s
I.	Transit	Ingress	28	1	15	
I.	Shadow	Egress		3	4	
I.	Transit	Egress		3	35	
I.	Shadow	Ingress		8	4	
IV.	Shadow	Egress	28	12	56	
IV.	Transit	Ingress		12	56	
IV.	Transit	Egress		17	48	
I.	Eclipse	Disapp.		21	57	35·0

Phases of the Eclipses of the Satellites for an inverting Telescope.



MARCH.

			d	h	m	s
I.	Occult.	Reapp.	1	0	47	
I.	Eclipse	Disapp.		0	54	24·5
I.	Occult.	Reapp.		4	54	
I.	Shadow	Ingress		19	12	
I.	Transit	Ingress		19	45	
I.	Shadow	Egress		21	33	
I.	Transit	Egress		22	5	
II.	Eclipse	Disapp.	2	16	26	2·8
II.	Occult.	Reapp.		19	17	
II.	Shadow	Ingress		19	19	
II.	Transit	Ingress		20	28	
II.	Shadow	Egress		22	15	
II.	Transit	Egress		23	24	
III.	Eclipse	Disapp.	3	1	39	24·4
III.	Occult.	Reapp.		7	34	
I.	Shadow	Ingress		13	41	
I.	Transit	Ingress		14	15	
I.	Shadow	Egress		16	1	
I.	Transit	Egress		16	36	
I.	Eclipse	Disapp.	4	10	54	31·3
I.	Occult.	Reapp.		13	48	
I.	Eclipse	Disapp.		14	12	27·9
I.	Occult.	Reapp. †		18	19	
I.	Shadow	Ingress	5	8	10	
I.	Transit	Ingress		8	46	
I.	Shadow	Egress		10	30	
I.	Transit	Egress		11	6	
I.	Eclipse	Disapp.	6	5	22	59·2
I.	Occult.	Reapp.		8	18	
II.	Shadow	Ingress		8	36	
II.	Transit	Ingress		9	52	
II.	Shadow	Egress		11	32	
II.	Transit	Egress		12	48	
III.	Shadow	Ingress		15	46	
III.	Transit	Ingress †		18	18	
III.	Shadow	Egress		19	29	
III.	Transit	Egress		22	0	
I.	Shadow	Ingress	7	2	38	
I.	Transit	Ingress		3	16	
I.	Shadow	Egress		4	59	
I.	Transit	Egress		5	36	
I.	Eclipse	Disapp.		23	51	29·4
I.	Occult.	Reapp.	8	2	48	
II.	Eclipse	Disapp.		3	31	30·6
II.	Occult.	Reapp.		7	45	
IV.	Eclipse	Disapp.		15	42	22·2

JUPITER'S SATELLITES.

MEAN TIME.

MARCH.

			d	h	m	s
IV.	Eclipse	Reapp.	8	20	23	46·0
I.	Shadow	Ingress		21	7	
I.	Transit	Ingress		21	46	
IV.	Occult.	Disapp.		21	48	
I.	Shadow	Egress		23	27	
I.	Transit	Egress	9	0	7	
IV.	Occult.	Reapp.		2	41	
I.	Eclipse	Disapp. †		18	19	56·1
I.	Occult.	Reapp.		21	18	
II.	Shadow	Ingress		21	53	
II.	Transit	Ingress		23	16	
II.	Shadow	Egress	10	0	49	
II.	Transit	Egress		2	12	
III.	Eclipse	Disapp.		5	39	5·2
III.	Occult.	Reapp.		12	2	
I.	Shadow	Ingress		15	35	
I.	Transit	Ingress		16	17	
I.	Shadow	Egress †		17	56	
I.	Transit	Egress		18	37	
I.	Eclipse	Disapp.	11	12	48	24·0
I.	Occult.	Reapp.		15	48	
II.	Eclipse	Disapp.		16	49	30·7
II.	Occult.	Reapp.		21	10	
I.	Shadow	Ingress	12	10	4	
I.	Transit	Ingress		10	47	
I.	Shadow	Egress		12	24	
I.	Transit	Egress		13	7	
I.	Eclipse	Disapp.	13	7	16	50·9
I.	Occult.	Reapp.		10	18	
II.	Shadow	Ingress		11	10	
II.	Transit	Ingress		12	40	
II.	Shadow	Egress		14	6	
II.	Transit	Egress		15	36	
III.	Shadow	Ingress		19	47	
III.	Transit	Ingress		22	45	
III.	Shadow	Egress		23	29	
III.	Transit	Egress	14	2	28	
I.	Shadow	Ingress		4	33	
I.	Transit	Ingress		5	17	
I.	Shadow	Egress		6	53	
I.	Transit	Egress		7	37	
I.	Eclipse	Disapp.	15	1	45	20·5
I.	Occult.	Reapp.		4	48	
II.	Eclipse	Disapp.	15	6	8	27
II.	Occult.	Reapp.		10	35	
I.	Shadow	Ingress		23	1	
I.	Transit	Ingress		23	47	
I.	Shadow	Egress	16	1	22	
I.	Transit	Egress		2	8	
I.	Eclipse	Disapp.		20	13	46
I.	Occult.	Reapp.		23	18	
II.	Shadow	Ingress	17	0	28	
II.	Transit	Ingress		2	4	
IV.	Shadow	Ingress		2	13	
II.	Shadow	Egress		3	24	
II.	Transit	Egress		5	0	
IV.	Shadow	Egress		7	6	
IV.	Transit	Ingress		9	34	
III.	Eclipse	Disapp.		9	38	36
IV.	Transit	Egress		14	29	
III.	Occult.	Reapp.		16	29	
I.	Shadow	Ingress †		17	30	
I.	Transit	Ingress		18	17	
I.	Shadow	Egress		19	50	
I.	Transit	Egress		20	38	
I.	Eclipse	Disapp.	18	14	42	13
I.	Occult.	Reapp. †		17	49	
II.	Eclipse	Disapp.		19	26	24
II.	Occult.	Reapp.	19	0	0	
I.	Shadow	Ingress		11	58	
I.	Transit	Ingress		12	47	
I.	Shadow	Egress		14	19	
I.	Transit	Egress		15	8	
I.	Eclipse	Disapp.	20	9	10	39
I.	Occult.	Reapp.		12	19	
II.	Shadow	Ingress		13	45	
II.	Transit	Ingress		15	27	
II.	Shadow	Egress		16	41	
II.	Transit	Egress		18	23	
III.	Shadow	Ingress		23	47	
III.	Transit	Ingress	21	3	12	
III.	Shadow	Egress		3	30	
I.	Shadow	Ingress		6	27	
III.	Transit	Egress		6	55	
I.	Transit	Ingress		7	18	
I.	Shadow	Egress		8	47	

JUPITER'S SATELLITES.

MEAN TIME.

MARCH.

		d	h	m	s
I.	Transit	Egress	21	9	38	
I.	Eclipse	Disapp.	22	3	39	8·6
I.	Occult.	Reapp.		6	49	
II.	Eclipse	Disapp.		8	45	14·4
II.	Occult.	Reapp.		13	25	
I.	Shadow	Ingress	23	0	55	
I.	Transit	Ingress		1	48	
I.	Shadow	Egress		3	16	
I.	Transit	Egress		4	8	
I.	Eclipse	Disapp.		22	7	33·8
I.	Occult.	Reapp.	24	1	19	
II.	Shadow	Ingress		3	2	
II.	Transit	Ingress		4	50	
II.	Shadow	Egress		5	58	
II.	Transit	Egress		7	47	
III.	Eclipse	Disapp.		13	38	0·3
I.	Shadow	Ingress		19	24	
I.	Transit	Ingress		20	18	
III.	Occult.	Reapp.		20	54	
I.	Shadow	Egress		21	44	
I.	Transit	Egress		22	38	
IV.	Eclipse	Disapp.	25	9	50	17·7
IV.	Eclipse	Reapp.		14	32	57·8
I.	Eclipse	Disapp.		16	36	0·5
IV.	Occult.	Disapp.		18	17	
I.	Occult.	Reapp.		19	49	
II.	Eclipse	Disapp.		22	3	7·3
IV.	Occult.	Reapp.		23	13	
II.	Occult.	Reapp.	26	2	49	
I.	Shadow	Ingress		13	53	
I.	Transit	Ingress		14	48	
I.	Shadow	Egress		16	13	
I.	Transit	Egress †		17	8	
I.	Eclipse	Disapp.	27	11	4	25·8
I.	Occult.	Reapp.	27	14	18	
II.	Shadow	Ingress		16	19	
II.	Transit	Ingress		18	14	
II.	Shadow	Egress		19	16	
II.	Transit	Egress		21	10	
III.	Shadow	Ingress	28	3	48	
III.	Shadow	Egress		7	30	
III.	Transit	Ingress		7	37	
I.	Shadow	Ingress		8	21	
I.	Transit	Ingress		9	18	
I.	Shadow	Egress		10	42	
III.	Transit	Egress		11	20	
I.	Transit	Egress		11	38	
I.	Eclipse	Disapp.	29	5	32	54·4
I.	Occult.	Reapp.		8	48	
II.	Eclipse	Disapp.		11	21	50·9
II.	Occult.	Reapp.		16	13	
I.	Shadow	Ingress	30	2	50	
I.	Transit	Ingress		3	48	
I.	Shadow	Egress		5	10	
I.	Transit	Egress		6	8	
I.	Eclipse	Disapp.	31	0	1	19·1
I.	Occult.	Reapp.		3	18	
II.	Shadow	Ingress		5	36	
II.	Transit	Ingress		7	36	
II.	Shadow	Egress		8	33	
II.	Transit	Egress		10	33	
III.	Eclipse	Disapp. †		17	37	29·3
III.	Eclipse	Reapp.		21	10	47·0
I.	Shadow	Ingress		21	18	
III.	Occult.	Disapp.		21	33	
I.	Transit	Ingress		22	18	
I.	Shadow	Egress		23	39	

JUPITER'S SATELLITES.

MEAN TIME.

MARCH.

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.

III.

II.

IV.

APRIL.

		d	h	m	s
I. Transit	Egress	1	0	38	
III. Occult.	Reapp.		1	16	
I. Eclipse	Disapp.		18	29	45·4
I. Occult.	Reapp.		21	48	
II. Eclipse	Disapp.	2	0	39	40·5
II. Occult.	Reapp.		5	37	
I. Shadow	Ingress		15	47	
I. Transit	Ingress †		16	48	
I. Shadow	Egress		18	7	
I. Transit	Egress		19	8	
IV. Shadow	Ingress		20	22	
IV. Shadow	Egress	3	1	16	
IV. Transit	Ingress		5	53	
IV. Transit	Egress		10	49	
I. Eclipse	Disapp.		12	58	9·9
I. Occult.	Reapp. †		16	18	
II. Shadow	Ingress		18	54	
II. Transit	Ingress		20	59	
II. Shadow	Egress		21	50	
II. Transit	Egress		23	56	
III. Shadow	Ingress	4	7	47	
I. Shadow	Ingress		10	15	
I. Transit	Ingress		11	18	
III. Shadow	Egress		11	30	
III. Transit	Ingress		11	59	
I. Shadow	Egress		12	36	
I. Transit	Egress		13	38	
III. Transit	Egress		15	41	

		d	h	m	s
I. Eclipse	Disapp.	5	7	26	38·2
I. Occult.	Reapp.		10	47	
II. Eclipse	Disapp.		13	58	17·1
II. Occult.	Reapp.		19	1	
I. Shadow	Ingress	6	4	44	
I. Transit	Ingress		5	47	
I. Shadow	Egress		7	4	
I. Transit	Egress		8	8	
I. Eclipse	Disapp.	7	1	55	2·4
I. Occult.	Reapp.		5	17	
II. Shadow	Ingress		8	11	
II. Transit	Ingress		10	22	
II. Shadow	Egress		11	7	
II. Transit	Egress		13	18	
III. Eclipse	Disapp.		21	37	31·5
I. Shadow	Ingress		23	12	
I. Transit	Ingress	8	0	17	
III. Eclipse	Reapp.		1	10	54·2
I. Shadow	Egress		1	33	
III. Occult.	Disapp.		1	55	
I. Transit	Egress		2	37	
III. Occult.	Reapp.		5	38	
I. Eclipse	Disapp.		20	23	28·5
I. Occult.	Reapp.		23	47	
II. Eclipse	Disapp.	9	3	16	3·4
II. Occult.	Reapp.		8	24	
I. Shadow	Ingress		17	41	
I. Transit	Ingress		18	47	

JUPITER'S SATELLITES

MEAN TIME.

APRIL.

		d	h	m	s
I. Shadow	Egress	9	20	1	
I. Transit	Egress		21	7	
I. Eclipse	Disapp.	10	14	51	52·4
I. Occult.	Reapp.		18	16	
II. Shadow	Ingress		21	28	
II. Transit	Ingress		23	44	
II. Shadow	Egress	11	0	25	
II. Transit	Egress		2	40	
IV. Eclipse	Disapp.		3	57	36·5
IV. Eclipse	Reapp.		8	41	11·5
III. Shadow	Ingress		11	47	
I. Shadow	Ingress		12	9	
I. Transit	Ingress		13	16	
IV. Occult.	Disapp.		14	23	
I. Shadow	Egress		14	30	
III. Shadow	Egress		15	30	
I. Transit	Egress		15	37	
III. Transit	Ingress †		16	19	
IV. Occult.	Reapp.		19	19	
III. Transit	Egress		20	2	
I. Eclipse	Disapp.	12	9	20	20·6
I. Occult.	Reapp.		12	46	
II. Eclipse	Disapp. †		16	34	32·4
II. Occult.	Reapp.		21	46	
I. Shadow	Ingress	13	6	38	
I. Transit	Ingress		7	46	
I. Shadow	Egress		8	58	
I. Transit	Egress		10	6	
I. Eclipse	Disapp.	14	3	48	44·4
I. Occult.	Reapp.		7	15	
II. Shadow	Ingress		10	46	
II. Transit	Ingress		13	5	
II. Shadow	Egress		13	42	
II. Transit	Egress †		16	2	
I. Shadow	Ingress	15	1	6	
III. Eclipse	Disapp.		1	37	15·9
I. Transit	Ingress		2	16	
I. Shadow	Egress		3	27	
I. Transit	Egress		4	36	
III. Eclipse	Reapp.		5	10	42·4
III. Occult.	Disapp.		6	14	
III. Occult.	Reapp.		9	57	
I. Eclipse	Disapp.		22	17	10·3

		d	h	m	s
I. Occult.	Reapp.	16	1	45	
II. Eclipse	Disapp.		5	52	15·4
II. Occult.	Reapp.		11	9	
I. Shadow	Ingress		19	35	
I. Transit	Ingress		20	45	
I. Shadow	Egress		21	55	
I. Transit	Egress		23	5	
I. Eclipse	Disapp. †	17	16	45	33·8
I. Occult.	Reapp.		20	14	
II. Shadow	Ingress	18	0	3	
II. Transit	Ingress		2	27	
II. Shadow	Egress		2	59	
II. Transit	Egress		5	23	
I. Shadow	Ingress		14	3	
I. Transit	Ingress		15	15	
III. Shadow	Ingress †		15	47	
I. Shadow	Egress †		16	24	
I. Transit	Egress		17	35	
III. Shadow	Egress		19	29	
III. Transit	Ingress		20	36	
III. Transit	Egress	19	0	19	
I. Eclipse	Disapp.		11	14	2·1
IV. Shadow	Ingress		14	31	
I. Occult.	Reapp.		14	44	
II. Eclipse	Disapp.		19	10	37·1
IV. Shadow	Egress		19	26	
II. Occult.	Reapp.	20	0	31	
IV. Transit	Ingress.		1	46	
IV. Transit	Egress		6	41	
I. Shadow	Ingress		8	32	
I. Transit	Ingress		9	44	
I. Shadow	Egress		10	52	
I. Transit	Egress		12	5	
I. Eclipse	Disapp.	21	5	42	25·7
I. Occult.	Reapp.		9	13	
II. Shadow	Ingress		13	20	
II. Transit	Ingress †		15	48	
II. Shadow	Egress †		16	17	
II. Transit	Egress		18	45	
I. Shadow	Ingress	22	3	0	
I. Transit	Ingress		4	14	
I. Shadow	Egress		5	21	
III. Eclipse	Disapp.		5	37	

JUPITER'S SATELLITES.

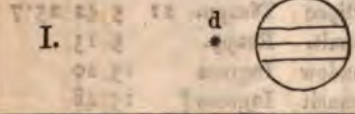
MEAN TIME.

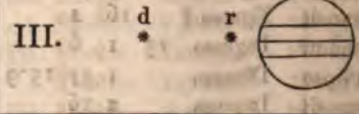
APRIL.

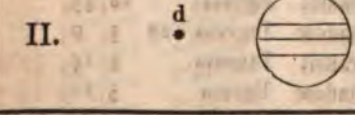
		d	h	m	s
I. Transit	Egress	22	6	34	
III. Eclipse	Reapp.		9	10	55·4
III. Occult.	Disapp.		10	31	
III. Occult.	Reapp.		14	13	
I. Eclipse	Disapp.	23	0	10	51·7
I. Occult.	Reapp.		3	43	
II. Eclipse	Disapp.		8	28	16·8
II. Occult.	Reapp.		13	53	
I. Shadow	Ingress		21	29	
I. Transit	Ingress		22	43	
I. Shadow	Egress		23	49	
I. Transit	Egress	24	1	3	
I. Eclipse	Disapp.		18	39	15·0
I. Occult.	Reapp.		22	12	
II. Shadow	Ingress	25	2	38	
II. Transit	Ingress		5	9	
II. Shadow	Egress		5	34	
II. Transit	Egress		8	6	
I. Shadow	Ingress †		15	57	
I. Transit	Ingress		17	12	
I. Shadow	Egress		18	18	
I. Transit	Egress		19	33	
III. Shadow	Ingress		19	46	
III. Shadow	Egress		23	29	
III. Transit	Ingress	26	0	51	
III. Transit	Egress		4	33	
I. Eclipse	Disapp.		13	7	43·2
I. Occult.	Reapp. †		16	41	
II. Eclipse	Disapp.		21	46	31·0

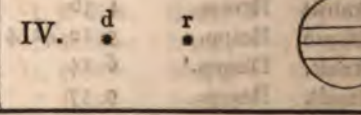
		d	h	m	s
II. Occult.	Reapp.	27	3	14	
I. Shadow	Ingress		10	26	
I. Transit	Ingress		11	42	
I. Shadow	Egress		12	46	
I. Transit	Egress		14	2	
IV. Eclipse	Disapp.		22	5	0
IV. Eclipse	Reapp.	28	2	49	8
I. Eclipse	Disapp.		7	36	6
IV. Occult.	Disapp.		9	58	
I. Occult.	Reapp.		11	10	
IV. Occult.	Reapp. †		14	53	
II. Shadow	Ingress †		15	55	
II. Transit	Ingress		18	30	
II. Shadow	Egress		18	52	
II. Transit	Egress		21	26	
I. Shadow	Ingress	29	4	54	
I. Transit	Ingress		6	11	
I. Shadow	Egress		7	14	
I. Transit	Egress		8	31	
III. Eclipse	Disapp.		9	36	58
III. Eclipse	Reapp.		13	10	30
III. Occult.	Disapp. †		14	44	
III. Occult.	Reapp.		18	26	
I. Eclipse	Disapp.	30	2	4	33
I. Occult.	Reapp.		5	40	
II. Eclipse	Disapp.		11	4	7
II. Occult.	Reapp.		16	35	
I. Shadow	Ingress		23	23	

Phases of the Eclipses of the Satellites for an inverting Telescope.









JUPITER'S SATELLITES.

MEAN TIME.

MAY.

		d	h	m	s
I. Transit	Ingress	1	0	40	
I. Shadow	Egress		1	43	
I. Transit	Egress		3	1	
I. Eclipse	Disapp.		20	32	56·0
I. Occult.	Reapp.	2	0	9	
II. Shadow	Ingress		5	13	
II. Transit	Ingress		7	50	
II. Shadow	Egress		8	9	
II. Transit	Egress		10	46	
I. Shadow	Ingress		17	51	
I. Transit	Ingress		19	9	
I. Shadow	Egress		20	11	
I. Transit	Egress		21	30	
III. Shadow	Ingress		23	46	
III. Shadow	Egress	3	3	29	
III. Transit	Ingress		5	3	
III. Transit	Egress		8	45	
I. Eclipse	Disapp. †		15	1	24·4
I. Occult.	Reapp.		18	38	
II. Eclipse	Disapp.	4	0	22	14·4
II. Occult.	Reapp.		5	55	
I. Shadow	Ingress		12	20	
I. Transit	Ingress		13	39	
I. Shadow	Egress †		14	40	
I. Transit	Egress †		15	59	
I. Eclipse	Disapp.	5	9	29	47·9
I. Occult.	Reapp.		13	7	
II. Shadow	Ingress		18	30	
II. Transit	Ingress		21	10	
II. Shadow	Egress		21	27	
II. Transit	Egress	6	0	6	
I. Shadow	Ingress		6	48	
I. Transit	Ingress		8	8	
IV. Shadow	Ingress		8	40	
I. Shadow	Egress		9	8	
I. Transit	Egress		10	28	
IV. Shadow	Egress		13	35	
III. Eclipse	Disapp.		13	36	24·7
III. Eclipse	Reapp.		17	9	56·9
III. Occult.	Disapp.		18	54	
IV. Transit	Ingress		21	3	
III. Occult.	Reapp.		22	36	
IV. Transit	Egress	7	1	56	

		d	h	m	s
I. Eclipse	Disapp.	7	3	58	14·4
I. Occult.	Reapp.		7	36	
II. Eclipse	Disapp.		13	39	47·7
II. Occult.	Reapp.		19	15	
I. Shadow	Ingress	8	1	17	
I. Transit	Ingress		2	37	
I. Shadow	Egress		3	37	
I. Transit	Egress		4	57	
I. Eclipse	Disapp.		22	26	37·4
I. Occult.	Reapp.	9	2	5	
II. Shadow	Ingress		7	48	
II. Transit	Ingress		10	29	
II. Shadow	Egress		10	44	
II. Transit	Egress		13	26	
I. Shadow	Ingress		19	45	
I. Transit	Ingress		21	5	
I. Shadow	Egress		22	5	
I. Transit	Egress		23	25	
III. Shadow	Ingress	10	3	46	
III. Shadow	Egress		7	29	
III. Transit	Ingress		9	12	
III. Transit	Egress		12	54	
I. Eclipse	Disapp.		16	55	6·1
I. Occult.	Reapp.		20	33	
II. Eclipse	Disapp.	11	2	57	47·4
II. Occult.	Reapp.		8	34	
I. Shadow	Ingress †		14	13	
I. Transit	Ingress †		15	34	
I. Shadow	Egress		16	34	
I. Transit	Egress		17	54	
I. Eclipse	Disapp.	12	11	23	29·8
I. Occult.	Reapp. *		15	2	
II. Shadow	Ingress		21	5	
II. Transit	Ingress		23	48	
II. Shadow	Egress	13	0	2	
II. Transit	Egress		2	45	
I. Shadow	Ingr			12	
I. Transit	In			3	
I. Shadow	E			2	
I. Transit					
III. Eclipse					47·8
III. Eclipse					9·7
III. Occult.					

JUPITER'S SATELLITES.

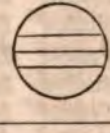
MEAN TIME.

MAY.

		d	h	m	s
II. Transit	Ingress	27	5	0	
II. Shadow	Egress		5	12	
II. Transit	Egress		7	56	
I. Shadow	Ingress		12	29	
I. Transit	Ingress *		13	51	
I. Shadow	Egress †		14	50	
I. Transit	Egress		16	11	
III. Eclipse	Disapp.	28	1	35	30·8
III. Eclipse	Reapp.		5	8	58·9
III. Occult.	Disapp.		7	3	
I. Eclipse	Disapp.		9	39	27·3
III. Occult.	Reapp.		10	44	
I. Occult.	Reapp. †		13	19	
II. Eclipse	Disapp.		21	25	50·4
II. Occult.	Reapp.	29	3	3	
I. Shadow	Ingress		6	58	
I. Transit	Ingress		8	20	
I. Shadow	Egress		9	18	
I. Transit	Egress		10	40	
I. Eclipse	Disapp.	30	4	7	51·3
I. Occult.	Reapp.		7	47	
II. Shadow	Ingress †		15	34	
II. Transit	Ingress		18	17	
II. Shadow	Egress		18	30	
II. Transit	Egress		21	13	
I. Shadow	Ingress	31	1	26	
I. Transit	Ingress		2	48	
I. Shadow	Egress		3	46	
I. Transit	Egress		5	8	
IV. Eclipse	Disapp.		10	21	21·1
IV. Eclipse	Reapp. †		15	5	32·7
III. Shadow	Ingress †		15	45	
III. Shadow	Egress		19	28	
III. Transit	Ingress		21	15	
I. Eclipse	Disapp.		22	36	21·9
IV. Occult.	Disapp.		23	4	

Phases of the Eclipses of the Satellites for an inverting Telescope.

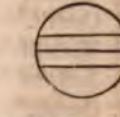
I. d *



III. d * r *

II. d *

IV. d * r *



JUNE.

		d	h	m	s
III. Transit	Egress	1	0	56	
I. Occult.	Reapp.		2	16	
IV. Occult.	Reapp.		3	53	
II. Eclipse	Disapp.		10	43	30·5
II. Occult.	Reapp.		16	20	
I. Shadow	Ingress		19	55	
I. Transit	Ingress		21	16	
I. Shadow	Egress		22	15	
I. Transit	Egress		23	36	
I. Eclipse	Disapp.	2	17	4	47·2
I. Occult.	Reapp.		20	44	
II. Shadow	Ingress	3	4	51	
II. Transit	Ingress		7	33	
II. Shadow	Egress		7	48	
II. Transit	Egress		10	29	
I. Shadow	Ingress *		14	23	
I. Transit	I[illegible]s †		15	44	
I. Shadow			16	43	

JUPITER'S SATELLITES.

MEAN TIME.

JUNE.

		d	h	m	s
IV. Eclipse	Reapp.	17	9	13	28·0
II. Shadow	Ingress		10	3	
II. Transit	Ingress *		12	34	
II. Shadow	Egress *		13	0	
II. Transit	Egress †		15	30	
IV. Occult.	Disapp.		16	18	
I. Shadow	Ingress		18	10	
I. Transit	Ingress		19	26	
I. Shadow	Egress		20	31	
IV. Occult.	Reapp.		21	3	
I. Transit	Egress		21	46	
III. Eclipse	Disapp. *	18	13	35	38·0
I. Eclipse	Disapp. †		15	21	6·1
III. Eclipse	Reapp.		17	8	52·0
III. Occult.	Disapp.		18	35	
I. Occult.	Reapp.		18	54	
III. Occult.	Reapp.		22	15	
II. Eclipse	Disapp.	19	5	10	40·4
II. Occult.	Reapp.		10	32	
I. Shadow	Ingress *		12	39	
I. Transit	Ingress *		13	53	
I. Shadow	Egress †		14	59	
I. Transit	Egress		16	13	
I. Eclipse	Disapp.	20	9	49	32·4
I. Occult.	Reapp. *		13	21	
II. Shadow	Ingress		23	22	
II. Transit	Ingress	21	1	48	
II. Shadow	Egress		2	18	
II. Transit	Egress		4	44	
I. Shadow	Ingress		7	7	
I. Transit	Ingress		8	21	
I. Shadow	Egress		9	28	
I. Transit	Egress		10	40	
III. Shadow	Ingress	22	3	45	
I. Eclipse	Disapp.		4	18	6·1
III. Shadow	Egress		7	27	
I. Occult.	Reapp.		7	49	
III. Transit	Ingress		8	40	
III. Transit	Egress *		12	19	
II. Eclipse	Disapp.		18	28	6·2
II. Occult.	Reapp.		23	45	
I. Shadow	Ingress	23	1	36	
I. Transit	Ingress		2	48	

		d	h	m	s
I. Shadow	Egress	23	3	56	
I. Transit	Egress		5	8	
I. Eclipse	Disapp.		22	46	34·5
I. Occult.	Reapp.	24	2	16	
II. Shadow	Ingress *		12	39	
II. Transit	Ingress †		15	1	
II. Shadow	Egress †		15	36	
II. Transit	Egress		17	57	
I. Shadow	Ingress		20	4	
I. Transit	Ingress		21	15	
I. Shadow	Egress		22	24	
I. Transit	Egress		23	35	
IV. Shadow	Ingress †	25	15	9	
I. Eclipse	Disapp.		17	15	7·5
III. Eclipse	Disapp.		17	35	25·7
IV. Shadow	Egress		20	4	
I. Occult.	Reapp.		20	43	
III. Eclipse	Reapp.		21	8	32·8
III. Occult.	Disapp.		22	16	
III. Occult.	Reapp.	26	1	55	
IV. Transit	Ingress		2	6	
IV. Transit	Egress		6	49	
II. Eclipse	Disapp.		7	45	25·5
II. Occult.	Reapp. *		12	58	
I. Shadow	Ingress *		14	33	
I. Transit	Ingress †		15	43	
I. Shadow	Egress		16	53	
I. Transit	Egress		18	2	
I. Eclipse	Disapp. †	27	11	43	35·1
I. Occult.	Reapp. †		15	10	
II. Shadow	Ingress	28	1	58	
II. Transit	Ingress		4	14	
II. Shadow	Egress		4	54	
II. Transit	Egress		7	10	
I. Shadow	Ingress		9	1	
I. Transit	Ingress		10	10	
I. Shadow	Egress †		11	21	
I. Transit	Egress			29	
I. Eclipse	Disap				10·2
III. Shadow	Ing				
I. Occult.	R				
III. Shadow	I				
III. Transit					

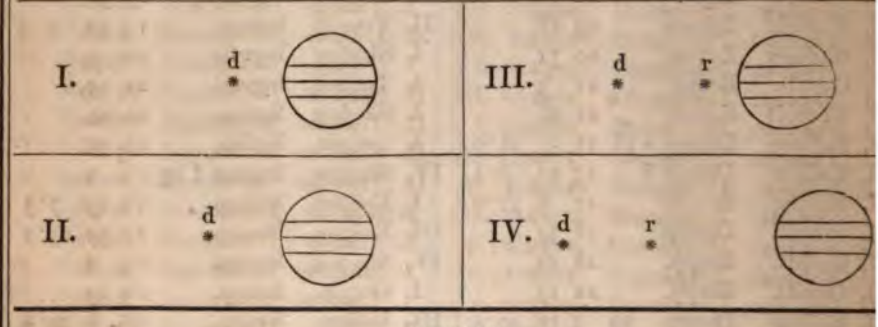
JUPITER'S SATELLITES.

MEAN TIME.

JUNE.

		d	h	m	s
III. Transit	Egress	29	15	58	
II. Eclipse	Disapp.		21	2	48·1
II. Occult.	Reapp.	30	2	9	
I. Shadow	Ingress		3	29	
I. Transit	Ingress	30	4	37	
I. Shadow	Egress		5	50	
I. Transit	Egress		6	56	

Phases of the Eclipses of the Satellites for an inverting Telescope.



JULY.

		d	h	m	s
I. Eclipse	Disapp.	1	0	40	39·8
I. Occult.	Reapp.		4	5	
II. Shadow	Ingress †		15	16	
II. Transit	Ingress		17	26	
II. Shadow	Egress		18	12	
II. Transit	Egress		20	22	
I. Shadow	Ingress		21	58	
I. Transit	Ingress		23	4	
I. Shadow	Egress	2	0	18	
I. Transit	Egress		1	23	
I. Eclipse	Disapp.		19	9	14·3
III. Eclipse	Disapp.		21	35	17·2
I. Occult.	Reapp.		22	32	
III. Eclipse	Reapp.	3	1	8	16·2
III. Occult.	Disapp.		1	53	
III. Occult.	Reapp.		5	31	
II. Eclipse	Disapp.		10	20	6·8
II. Occult.	Reapp. †		15	20	
I. Shadow	Ingress		16	26	
I. Transit	Ingress		17	30	
I. Shadow	Egress		18	47	
I. Transit	Egress		19	50	
IV. Eclipse	Disapp.		22	39	31·5
IV. Eclipse	Reapp.	4	3	22	18
IV. Occult.	Disapp.		8	34	
IV. Occult.	Reapp. *		13	16	
I. Eclipse	Disapp. *		13	37	43
I. Occult.	Reapp.		16	58	
II. Shadow	Ingress	5	4	35	
II. Transit	Ingress		6	38	
II. Shadow	Egress		7	31	
II. Transit	Egress		9	34	
I. Shadow	Ingress †		10	55	
I. Transit	Ingress *		11	57	
I. Shadow	Egress *		13	15	
I. Transit	Egress *		14	17	
I. Eclipse	Disapp.	6	8	6	19
I. Occult.	Reapp. *		11	25	
III. Shadow	Ingress *		11	45	
III. Shadow	Egress †		15	28	
III. Transit	Ingress †		15	53	
III. Transit	Egress		19	32	
II. Eclipse	Disapp.		23	37	27
II. Occult.	Reapp.	7	4	31	
I. Shadow	Ingress		5	23	
I. Transit	Ingress		6	24	

JUPITER'S SATELLITES.

MEAN TIME.

JULY.

			d	h	m	s
I.	Shadow	Egress	7	7	43	
I.	Transit	Egress		8	43	
I.	Eclipse	Disapp.	8	2	34	50·9
I.	Occult.	Reapp.		5	52	
II.	Shadow	Ingress		17	52	
II.	Transit	Ingress		19	49	
II.	Shadow	Egress		20	49	
II.	Transit	Egress		22	45	
I.	Shadow	Ingress		23	52	
I.	Transit	Ingress	9	0	51	
I.	Shadow	Egress		2	12	
I.	Transit	Egress		3	10	
I.	Eclipse	Disapp.		21	3	27·3
I.	Occult.	Reapp.	10	0	19	
III.	Eclipse	Disapp.		1	35	23·4
III.	Eclipse	Reapp.		5	8	13·1
III.	Occult.	Disapp.		5	25	
III.	Occult.	Reapp.		9	3	
II.	Eclipse	Disapp. *		12	54	45·6
II.	Occult.	Reapp.		17	41	
I.	Shadow	Ingress		18	20	
I.	Transit	Ingress		19	17	
I.	Shadow	Egress		20	40	
I.	Transit	Egress		21	37	
I.	Eclipse	Disapp. †	11	15	31	57·6
I.	Occult.	Reapp.		18	46	
II.	Shadow	Ingress	12	7	11	
II.	Transit	Ingress		9	0	
IV.	Shadow	Ingress		9	19	
II.	Shadow	Egress †		10	8	
II.	Transit	Egress *		11	56	
I.	Shadow	Ingress *		12	49	
I.	Transit	Ingress *		13	44	
IV.	Shadow	Egress *		14	13	
I.	Shadow	Egress †		15	9	
I.	Transit	Egress		16	3	
IV.	Transit	Ingress		17	53	
IV.	Transit	Egress		22	35	
I.	Eclipse	Disapp. †	13	10	0	36·0
I.	Occult.	Reapp. *		13	12	
III.	Shadow	Ingress †		15	45	
III.	Transit	Ingress		19	23	
III.	Shadow	Egress		19	27	
III.	Transit	Egress	13	23	1	
II.	Eclipse	Disapp.	14	2	12	4·1
II.	Occult.	Reapp.		6	50	
I.	Shadow	Ingress		7	17	
I.	Transit	Ingress		8	10	
I.	Shadow	Egress		9	37	
I.	Transit	Egress †		10	30	
I.	Eclipse	Disapp.	15	4	29	8·9
I.	Occult.	Reapp.		7	39	
II.	Shadow	Ingress		20	29	
II.	Transit	Ingress		22	10	
II.	Shadow	Egress		23	26	
II.	Transit	Egress	16	1	6	
I.	Shadow	Ingress		1	46	
I.	Transit	Ingress		2	36	
I.	Shadow	Egress		4	6	
I.	Transit	Egress		4	56	
I.	Eclipse	Disapp.		22	57	47·2
I.	Occult.	Reapp.	17	2	5	
III.	Eclipse	Disapp.		5	36	13·0
III.	Occult.	Reapp. *		12	31	
II.	Eclipse	Disapp. †		15	29	22·9
II.	Occult.	Reapp.		19	59	
I.	Shadow	Ingress		20	14	
I.	Transit	Ingress		21	3	
I.	Shadow	Egress		22	34	
I.	Transit	Egress		23	22	
I.	Eclipse	Disapp.	18	17	26	19·2
I.	Occult.	Reapp.		20	32	
II.	Shadow	Ingress †	19	9	48	
II.	Transit	Ingress *		11	21	
II.	Shadow	Egress *		12	45	
II.	Transit	Egress *		14	16	
I.	Shadow	Ingress *		14	43	
I.	Transit	Ingress †		15	29	
I.	Shadow	Egress		17	3	
I.	Transit	Egress		17	49	
I.	Eclipse	Disapp. *	20	11	54	59·2
I.	Occult.	Reapp. *		14		
IV.	Eclipse	Disapp.				
III.	Shadow	Ingress				
IV.	Eclipse	Reapp.				
III.	Transit	Ing				

JUPITER'S SATELLITES.

MEAN TIME.

JULY.

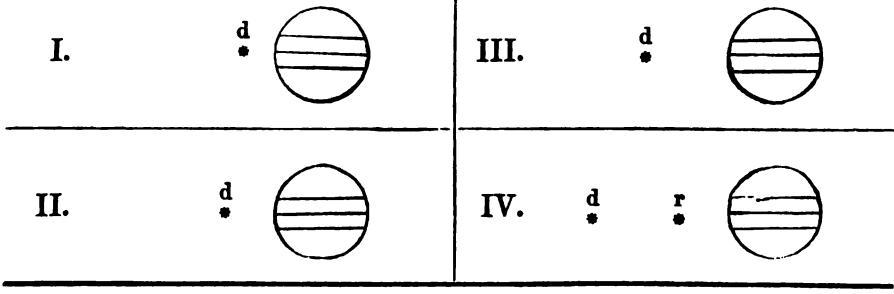
			d	h	m	s
III.	Shadow	Egress	20	23	27	
IV.	Occult.	Disapp.		23	52	
III.	Transit	Egress	21	2	26	
IV.	Occult.	Reapp.		4	32	
II.	Eclipse	Disapp.		4	46	41·2
II.	Occult.	Reapp.		9	8	
I.	Shadow	Ingress		9	11	
I.	Transit	Ingress †		9	56	
I.	Shadow	Egress *		11	31	
I.	Transit	Egress *		12	15	
I.	Eclipse	Disapp.	22	6	23	34·0
I.	Occult.	Reapp. †		9	25	
II.	Shadow	Ingress		23	6	
II.	Transit	Ingress	23	0	30	
II.	Shadow	Egress		2	3	
II.	Transit	Egress		3	26	
I.	Shadow	Ingress		3	40	
I.	Transit	Ingress		4	22	
I.	Shadow	Egress		6	0	
I.	Transit	Egress		6	41	
I.	Eclipse	Disapp.	24	0	52	14·2
I.	Occult.	Reapp.		3	51	
III.	Eclipse	Disapp. †		9	36	49·9
III.	Occult.	Reapp. †		15	55	
II.	Eclipse	Disapp.		18	4	0·9
I.	Shadow	Ingress		22	8	
II.	Occult.	Reapp.		22	16	
I.	Transit	Ingress		22	48	
I.	Shadow	Egress	25	0	28	
I.	Transit	Egress		1	8	
I.	Eclipse	Disapp.		19	20	47·8
I.	Occult.	Reapp.		22	17	
II.	Shadow	Ingress *	26	12	25	
II.	Transit	Ingress *		13	39	
II.	Shadow	Egress †		15	22	
II.	Transit	Egress		16	35	
I.	Shadow	Ingress	26	16	37	
I.	Transit	Ingress		17	14	
I.	Shadow	Egress		18	57	
I.	Transit	Egress		19	34	
I.	Eclipse	Disapp. *	27	13	49	29·8
I.	Occult.	Reapp.		16	44	
III.	Shadow	Ingress		23	45	
III.	Transit	Ingress	28	2	10	
III.	Shadow	Egress		3	27	
III.	Transit	Egress		5	48	
II.	Eclipse	Disapp.		7	21	19·6
I.	Shadow	Ingress *		11	5	
II.	Occult.	Reapp. *		11	24	
I.	Transit	Ingress *		11	40	
I.	Shadow	Egress *		13	25	
I.	Transit	Egress *		14	0	
IV.	Shadow	Ingress	29	3	31	
I.	Eclipse	Disapp.		8	18	6·4
IV.	Shadow	Egress		8	24	
IV.	Transit	Ingress †		8	50	
I.	Occult.	Reapp. *		11	10	
IV.	Transit	Egress *		13	31	
II.	Shadow	Ingress	30	1	43	
II.	Transit	Ingress		2	48	
II.	Shadow	Egress		4	40	
I.	Shadow	Ingress		5	34	
II.	Transit	Egress		5	44	
I.	Transit	Ingress		6	6	
I.	Shadow	Egress		7	54	
I.	Transit	Egress		8	26	
I.	Eclipse	Disapp.	31	2	46	48·6
I.	Occult.	Reapp.		5	36	
III.	Eclipse	Disapp. *		13	37	58·1
III.	Occult.	Reapp.		19	16	
II.	Eclipse	Disapp.		20	38	40·3

JUPITER'S SATELLITES.

MEAN TIME.

JULY.

Phases of the Eclipses of the Satellites for an inverting Telescope.



AUGUST.

			d	h	m	s
I.	Shadow	Ingress	1	0	2	
II.	Occult.	Reapp.		0	31	
I.	Transit	Ingress		0	32	
I.	Shadow	Egress		2	22	
I.	Transit	Egress		2	52	
I.	Eclipse	Disapp.		21	15	24·1
I.	Occult.	Reapp.	2	0	2	
II.	Shadow	Ingress *		15	3	
II.	Transit	Ingress †		15	57	
II.	Shadow	Egress		17	59	
I.	Shadow	Ingress		18	31	
II.	Transit	Egress		18	53	
I.	Transit	Ingress		18	58	
I.	Shadow	Egress		20	51	
I.	Transit	Egress		21	18	
I.	Eclipse	Disapp. †	3	15	44	8·1
I.	Occult.	Reapp.		18	28	
III.	Shadow	Ingress	4	3	45	
III.	Transit	Ingress		5	29	
III.	Shadow	Egress		7	27	
III.	Transit	Egress †		9	7	
II.	Eclipse	Disapp. *		9	56	0·0
I.	Shadow	Ingress *		12	59	
I.	Transit	Ingress *		13	24	
II.	Occult.	Reapp. *		13	38	
I.	Shadow	Egress *		15	19	
I.	Transit	Egress †		15	44	
I.	Eclipse	Disapp. *	5	10	12	46·6

			d	h	m	s
I.	Occult.	Reapp. *	5	12	54	
II.	Shadow	Ingress	6	4	21	
II.	Transit	Ingress		5	5	
II.	Shadow	Egress		7	17	
I.	Shadow	Ingress		7	28	
I.	Transit	Ingress		7	50	
II.	Transit	Egress		8	1	
I.	Shadow	Egress *		9	48	
I.	Transit	Egress *		10	10	
IV.	Eclipse	Disapp. *		11	0	20·4
IV.	Occult.	Reapp.		19	5	
I.	Eclipse	Disapp.	7	4	41	30·9
I.	Occult.	Reapp.		7	20	
III.	Eclipse	Disapp.		17	38	38·3
III.	Occult.	Reapp.		22	35	
II.	Eclipse	Disapp.		23	13	22·6
I.	Shadow	Ingress	8	1	56	
I.	Transit	Ingress		2	16	
II.	Occult.	Reapp.		2	45	
I.	Shadow	Egress		4	16	
I.	Transit	Egress		4	35	
I.	Eclipse	Disapp.		22	10	8·6
I.	Occult.	Reapp.	e			
II.	Shadow	Ingress				
II.	Transit	Ingress				
I.	Shadow	Ingress				
II.	Shadow	Egress				
I.	Transit	Ingress				

JUPITER'S SATELLITES.

MEAN TIME.

AUGUST.

		d	h	m	s
II. Transit	Egress	9	21	10	
I. Shadow	Egress		22	45	
I. Transit	Egress		23	1	
I. Eclipse	Disapp.	10	17	38	54·5
I. Occult.	Reapp.		20	12	
III. Shadow	Ingress	11	7	46	
III. Transit	Ingress †		8	46	
III. Shadow	Egress *		11	27	
III. Transit	Egress *		12	25	
II. Eclipse	Disapp. *		12	30	44·5
I. Shadow	Ingress *		14	53	
I. Transit	Ingress *		15	8	
II. Occult.	Reapp. †		15	52	
I. Shadow	Egress		17	13	
I. Transit	Egress		17	27	
I. Eclipse	Disapp. *	12	12	7	35·1
I. Occult.	Reapp. *		14	38	
II. Shadow	Ingress	13	6	58	
II. Transit	Ingress		7	22	
I. Shadow	Ingress *		9	22	
I. Transit	Ingress *		9	33	
II. Shadow	Egress *		9	55	
II. Transit	Egress *		10	17	
I. Shadow	Egress *		11	42	
I. Transit	Egress *		11	53	
I. Eclipse	Disapp.	14	6	36	21·5
I. Occult.	Reapp. *		9	4	
III. Eclipse	Disapp.		21	39	20·0
IV. Shadow	Ingress		21	43	
IV. Transit	Ingress		23	12	
II. Eclipse	Disapp.	15	1	48	9·2
III. Occult.	Reapp.		1	51	
IV. Shadow	Egress		2	35	
I. Shadow	Ingress		3	50	
IV. Transit	Egress		3	54	
I. Transit	Ingress		3	59	
II. Occult.	Reapp.		4	58	
I. Shadow	Egress		6	10	
I. Transit	Egress		6	19	
I. Eclipse	Disapp.	16	1	5	1·1
I. Occult.	Reapp.		3	30	
II. Shadow	Ingress		20	18	
II. Transit	Ingress		20	30	

		d	h	m	s
I. Shadow	Ingress	16	22	19	
I. Transit	Ingress		22	25	
II. Shadow	Egress		23	14	
II. Transit	Egress		23	26	
I. Shadow	Egress	17	0	39	
I. Transit	Egress		0	45	
I. Eclipse	Disapp.		19	33	49·1
I. Occult.	Reapp.		21	56	
III. Shadow	Ingress *	18	11	47	
III. Transit	Ingress *		12	2	
II. Eclipse	Disapp. *		15	5	33·9
III. Shadow	Egress *		15	28	
III. Transit	Egress *		15	41	
I. Shadow	Ingress †		16	48	
I. Transit	Ingress †		16	51	
II. Occult.	Reapp.		18	5	
I. Shadow	Egress		19	8	
I. Transit	Egress		19	11	
I. Occult.	Disapp. *	19	14	2	
I. Occult.	Reapp. †		16	22	
II. Shadow	Ingress *	20	9	36	
II. Transit	Ingress *		9	38	
I. Shadow	Ingress *		11	16	
I. Transit	Ingress *		11	17	
II. Shadow	Egress *		12	32	
II. Transit	Egress *		12	33	
I. Shadow	Egress *		13	36	
I. Transit	Egress *		13	36	
I. Occult.	Disapp. *	21	8	28	
I. Occult.	Reapp. *		10	48	
III. Occult.	Disapp.	22	1	28	
II. Occult.	Disapp.		4	16	
III. Eclipse	Reapp.		5	11	40·4
I. Transit	Ingress		5	42	
I. Shadow	Ingress		5	45	
II. Eclipse	Reapp. †		7	12	51·5
I. Transit	Egress †		8	2	
I. Shadow	Egress †		8	5	
I. Occult.	Disapp.	23	2	54	
IV. Occult.	Disapp.		4	34	
I. Eclipse	Reapp.		5	15	52·0
IV. Eclipse	Reapp. *		9	50	43·8
II. Transit	Ingress		22	46	

JUPITER'S SATELLITES.

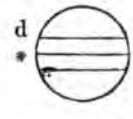
MEAN TIME.

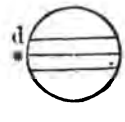
AUGUST.

			d	h	m	s
II.	Shadow	Ingress	23	22	56	
I.	Transit	Ingress	24	0	8	
I.	Shadow	Ingress		0	13	
II.	Transit	Egress		1	42	
II.	Shadow	Egress		1	52	
I.	Transit	Egress		2	28	
I.	Shadow	Egress		2	33	
I.	Occult.	Disapp.		21	20	
I.	Eclipse	Reapp.		23	44	41·4
III.	Transit	Ingress *	25	15	18	
III.	Shadow	Ingress †		15	48	
II.	Occult.	Disapp.		17	22	
I.	Transit	Ingress		18	34	
I.	Shadow	Ingress		18	42	
III.	Transit	Egress		18	57	
III.	Shadow	Egress		19	29	
II.	Eclipse	Reapp.		20	30	17·5
I.	Transit	Egress		20	54	
I.	Shadow	Egress		21	2	
I.	Occult.	Disapp. †	26	15	46	
I.	Eclipse	Reapp.		18	13	25·5
II.	Transit	Ingress *	27	11	54	
II.	Shadow	Ingress *		12	14	
I.	Transit	Ingress *		13	0	
I.	Shadow	Ingress *		13	11	
II.	Transit	Egress *		14	50	
II.	Shadow	Egress *		15	11	
I.	Transit	Egress *	27	15	20	
I.	Shadow	Egress †		15	31	
I.	Occult.	Disapp. *	28	10	12	
I.	Eclipse	Reapp. *		12	42	15·8
III.	Occult.	Disapp.	29	4	45	
II.	Occult.	Disapp.		6	29	
I.	Transit	Ingress †		7	26	
I.	Shadow	Ingress †		7	39	
III.	Eclipse	Reapp. *		9	12	30·3
I.	Transit	Egress *		9	46	
II.	Eclipse	Reapp. *		9	47	46·4
I.	Shadow	Egress *		9	59	
I.	Occult.	Disapp.	30	4	39	
I.	Eclipse	Reapp. †		7	10	58·6
II.	Transit	Ingress	31	1	3	
II.	Shadow	Ingress		1	34	
I.	Transit	Ingress		1	52	
I.	Shadow	Ingress		2	8	
II.	Transit	Egress		3	59	
I.	Transit	Egress		4	12	
I.	Shadow	Egress		4	28	
II.	Shadow	Egress		4	30	
IV.	Transit	Ingress *		13	25	
IV.	Shadow	Ingress †		15	57	
IV.	Transit	Egress		18	8	
IV.	Shadow	Egress		20	46	
I.	Occult.	Disapp.		23	5	

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.

III. 

II. 

IV.

JUPITER'S SATELLITES.

MEAN TIME.

AUGUST.

			d	h	m	s
II.	Transit	Egress	9	21	10	
I.	Shadow	Egress		22	45	
I.	Transit	Egress		23	1	
I.	Eclipse	Disapp.	10	17	38	54·5
I.	Occult.	Reapp.		20	12	
III.	Shadow	Ingress	11	7	46	
III.	Transit	Ingress †		8	46	
III.	Shadow	Egress *		11	27	
III.	Transit	Egress *		12	25	
II.	Eclipse	Disapp. *		12	30	44·5
I.	Shadow	Ingress *		14	53	
I.	Transit	Ingress *		15	8	
II.	Occult.	Reapp. †		15	52	
I.	Shadow	Egress		17	13	
I.	Transit	Egress		17	27	
I.	Eclipse	Disapp. *	12	12	7	35·1
I.	Occult.	Reapp. *		14	38	
II.	Shadow	Ingress	13	6	58	
II.	Transit	Ingress		7	22	
I.	Shadow	Ingress *		9	22	
I.	Transit	Ingress *		9	33	
II.	Shadow	Egress *		9	55	
II.	Transit	Egress *		10	17	
I.	Shadow	Egress *		11	42	
I.	Transit	Egress *		11	53	
I.	Eclipse	Disapp.	14	6	36	21·5
I.	Occult.	Reapp. *		9	4	
III.	Eclipse	Disapp.		21	39	20·0
IV.	Shadow	Ingress		21	43	
IV.	Transit	Ingress		23	12	
II.	Eclipse	Disapp.	15	1	48	9·2
III.	Occult.	Reapp.		1	51	
IV.	Shadow	Egress		2	35	
I.	Shadow	Ingress		3	50	
IV.	Transit	Egress		3	54	
I.	Transit	Ingress		3	59	
II.	Occult.	Reapp.		4	58	
I.	Shadow	Egress		6	10	
I.	Transit	Egress		6	19	
I.	Eclipse	Disapp.	16	1	5	1·1
I.	Occult.	Reapp.		3	30	
II.	Shadow	Ingress		20	18	
II.	Transit	Ingress		20	30	
I.	Shadow	Ingress	16	22	19	
I.	Transit	Ingress		22	25	
II.	Shadow	Egress		23	14	
II.	Transit	Egress		23	26	
I.	Shadow	Egress	17	0	39	
I.	Transit	Egress		0	45	
I.	Eclipse	Disapp.		19	33	49·1
I.	Occult.	Reapp.		21	56	
III.	Shadow	Ingress *	18	11	47	
III.	Transit	Ingress *		12	2	
II.	Eclipse	Disapp. *		15	5	33·9
III.	Shadow	Egress *		15	28	
III.	Transit	Egress *		15	41	
I.	Shadow	Ingress †		16	48	
I.	Transit	Ingress †		16	51	
II.	Occult.	Reapp.		18	5	
I.	Shadow	Egress		19	8	
I.	Transit	Egress		19	11	
I.	Occult.	Disapp. *	19	14	2	
I.	Occult.	Reapp. †		16	22	
II.	Shadow	Ingress *	20	9	36	
II.	Transit	Ingress *		9	38	
I.	Shadow	Ingress *		11	16	
I.	Transit	Ingress *		11	17	
II.	Shadow	Egress *		12	32	
II.	Transit	Egress *		12	33	
I.	Shadow	Egress *		13	36	
I.	Transit	Egress *		13	36	
I.	Occult.	Disapp. *	21	8	28	
I.	Occult.	Reapp. *		10	48	
III.	Occult.	Disapp.	22	1	28	
II.	Occult.	Disapp.		4	16	
III.	Eclipse	Reapp.		5	11	40·4
I.	Transit	Ingress		5	42	
I.	Shadow	Ingress		5	45	
II.	Eclipse	Reapp. †		7	12	51·5
I.	Transit	Egress †		8	2	
I.	Shadow	Egress †		8	5	
I.	Occult.	Disapp.	23	2	54	
IV.	Occult.	Disapp.		4	34	
I.	Eclipse	Reapp.		5	15	52·0
IV.	Eclipse	Reapp. *		9	50	43·8
II.	Transit	Ingress		22	46	

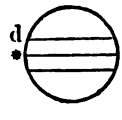
JUPITER'S SATELLITES.

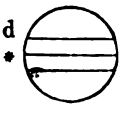
MEAN TIME.

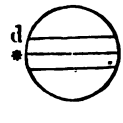
AUGUST.

			d	h	m	s
II.	Shadow	Ingress	23	22	56	
I.	Transit	Ingress	24	0	8	
I.	Shadow	Ingress		0	13	
II.	Transit	Egress		1	42	
II.	Shadow	Egress		1	52	
I.	Transit	Egress		2	28	
I.	Shadow	Egress		2	33	
I.	Occult.	Disapp.		21	20	
I.	Eclipse	Reapp.		23	44	41·4
III.	Transit	Ingress *	25	15	18	
III.	Shadow	Ingress †		15	48	
II.	Occult.	Disapp.		17	22	
I.	Transit	Ingress		18	34	
I.	Shadow	Ingress		18	42	
III.	Transit	Egress		18	57	
III.	Shadow	Egress		19	29	
II.	Eclipse	Reapp.		20	30	17·5
I.	Transit	Egress		20	54	
I.	Shadow	Egress		21	2	
I.	Occult.	Disapp. †	26	15	46	
I.	Eclipse	Reapp.		18	13	25·5
II.	Transit	Ingress *	27	11	54	
II.	Shadow	Ingress *		12	14	
I.	Transit	Ingress *		13	0	
I.	Shadow	Ingress *		13	11	
II.	Transit	Egress *		14	50	
II.	Shadow	Egress *		15	11	
I.	Transit	Egress *	27	15	20	
I.	Shadow	Egress †		15	31	
I.	Occult.	Disapp. *	28	10	12	
I.	Eclipse	Reapp. *		12	42	15·8
III.	Occult.	Disapp.	29	4	45	
II.	Occult.	Disapp.		6	29	
I.	Transit	Ingress †		7	26	
I.	Shadow	Ingress †		7	39	
III.	Eclipse	Reapp. *		9	12	30·3
I.	Transit	Egress *		9	46	
II.	Eclipse	Reapp. *		9	47	46·4
I.	Shadow	Egress *		9	59	
I.	Occult.	Disapp.	30	4	39	
I.	Eclipse	Reapp. †		7	10	58·6
II.	Transit	Ingress	31	1	3	
II.	Shadow	Ingress		1	34	
I.	Transit	Ingress		1	52	
I.	Shadow	Ingress		2	8	
II.	Transit	Egress		3	59	
I.	Transit	Egress		4	12	
I.	Shadow	Egress		4	28	
II.	Shadow	Egress		4	30	
IV.	Transit	Ingress *		13	25	
IV.	Shadow	Ingress †		15	57	
IV.	Transit	Egress		18	8	
IV.	Shadow	Egress		20	46	
I.	Occult.	Disapp.		23	5	

Phases of the Eclipses of the Satellites for an inverting Telescope.

I. 

III. 

II. 

IV.

JUPITER'S SATELLITES.

MEAN TIME.

SEPTEMBER.

		d	h	m	s
I. Eclipse	Reapp.	1	1	39	49·8
III. Transit	Ingress		18	34	
II. Occult.	Disapp.		19	36	
III. Shadow	Ingress		19	49	
I. Transit	Ingress		20	18	
I. Shadow	Ingress		20	37	
III. Transit	Egress		22	14	
I. Transit	Egress		22	38	
I. Shadow	Egress		22	56	
II. Eclipse	Reapp.		23	5	16·7
III. Shadow	Egress		23	29	
I. Occult.	Disapp.	2	17	31	
I. Eclipse	Reapp.		20	8	35·8
II. Transit	Ingress *	3	14	11	
I. Transit	Ingress *		14	44	
II. Shadow	Ingress †		14	53	
I. Shadow	Ingress †		15	5	
I. Transit	Egress		17	4	
II. Transit	Egress		17	7	
I. Shadow	Egress		17	25	
II. Shadow	Egress		17	49	
I. Occult.	Disapp. *	4	11	57	
I. Eclipse	Reapp. *		14	37	27·9
III. Occult.	Disapp. *	5	8	2	
II. Occult.	Disapp. *		8	43	
I. Transit	Ingress *		9	10	
I. Shadow	Ingress *		9	34	
I. Transit	Egress *		11	30	
I. Shadow	Egress *		11	54	
II. Eclipse	Reapp. *		12	22	49·1
III. Eclipse	Reapp. *		13	14	4·5
I. Occult.	Disapp.	6	6	23	
I. Eclipse	Reapp. *		9	6	12·5
II. Transit	Ingress	7	3	20	
I. Transit	Ingress		3	36	
I. Shadow	Ingress		4	3	
II. Shadow	Ingress		4	12	
I. Transit	Egress		5	56	
II. Transit	Egress		6	16	
I. Shadow	Egress		6	22	
II. Shadow	Egress †		7	9	
I. Occult.	Disapp.	8	0	49	
I. Eclipse	Reapp.		3	35	5·4

		d	h	m	s
IV. Occult.	Disapp.	8	18	48	
II. Occult.	Diaspp.		21	50	
III. Transit	Ingress		21	52	
I. Transit	Ingress		22	2	
I. Shadow	Ingress		22	31	
III. Shadow	Ingress		23	49	
I. Transit	Egress	9	0	22	
I. Shadow	Egress		0	51	
III. Transit	Egress		1	32	
II. Eclipse	Reapp.		1	40	23·8
III. Shadow	Egress		3	30	
IV. Eclipse	Reapp.		4	1	20·6
I. Occult.	Disapp.		19	16	
I. Eclipse	Reapp.		22	3	52·9
I. Transit	Ingress	10	16	28	
II. Transit	Ingress		16	29	
I. Shadow	Ingress		17	0	
II. Shadow	Ingress		17	31	
I. Transit	Egress		18	48	
I. Shadow	Egress		19	20	
II. Transit	Egress		19	25	
II. Shadow	Egress		20	27	
I. Occult.	Disapp. *	11	13	42	
I. Eclipse	Reapp.		16	32	46·8
I. Transit	Ingress *	12	10	54	
II. Occult.	Disapp. *		10	58	
III. Occult.	Disapp. *		11	22	
I. Shadow	Ingress *		11	29	
I. Transit	Egress *		13	14	
I. Shadow	Egress *		13	48	
II. Eclipse	Reapp. †		14	58	0·4
III. Eclipse	Reapp.		17	15	23·9
I. Occult.	Disapp. *	13	8	9	
I. Eclipse	Reapp. *		11	1	33·0
I. Transit	Ingress	14	5	21	
II. Transit	Ingress		5	38	
I. Shadow	Ingress		5	57	
II. Shadow	Ingress †		6	51	
I. Transit	Egress *		7	41	
I. Shadow	Egress *		8	17	
II. Transit	Egress *		8	34	
II. Shadow	Egress *		9	47	
I. Occult.	Disapp.	15	2	35	

JUPITER'S SATELLITES.

MEAN TIME.

SEPTEMBER.

		d	h	m	s
I. Eclipse	Reapp.	15	5	30	27·4
I. Transit	Ingress		23	47	
II. Occult.	Disapp.	16	0	6	
I. Shadow	Ingress		0	26	
III. Transit	Ingress		1	13	
I. Transit	Egress		2	7	
I. Shadow	Egress		2	46	
III. Shadow	Ingress		3	50	
II. Eclipse	Reapp.		4	15	39·8
III. Transit	Egress		4	52	
III. Shadow	Egress *		7	30	
I. Occult.	Disapp.		21	2	
I. Eclipse	Reapp.		23	59	16·5
IV. Transit	Ingress	17	3	55	
IV. Transit	Egress *		8	41	
IV. Shadow	Ingress *		10	11	
IV. Shadow	Egress		14	58	
I. Transit	Ingress		18	13	
II. Transit	Ingress		18	48	
I. Shadow	Ingress		18	55	
II. Shadow	Ingress		20	9	
I. Transit	Egress		20	33	
I. Shadow	Egress		21	14	
II. Transit	Egress		21	44	
II. Shadow	Egress		23	5	
I. Occult.	Disapp.	18	15	28	
I. Eclipse	Reapp.		18	28	11·9
I. Transit	Ingress *	19	12	40	
II. Occult.	Disapp. *		13	14	
I. Shadow	Ingress *		13	23	
III. Occult.	Disapp.		14	45	
I. Transit	Egress		15	0	
I. Shadow	Egress		15	43	
II. Eclipse	Reapp.		17	33	21·0
III. Eclipse	Reapp.		21	17	10·5
I. Occult.	Disapp. *	20	9	55	
I. Eclipse	Reapp. *		12	56	59·7
I. Transit	Ingress *	21	7	6	
I. Shadow	Ingress *		7	52	
II. Transit	Ingress *		7	59	
I. Transit	Egress *		9	26	
II. Shadow	Ingress *		9	29	
I. Shadow	Egress *		10	12	

		d	h	m	s
II. Transit	Egress *	21	10	55	
II. Shadow	Egress *		12	25	
I. Occult.	Disapp.	22	4	21	
I. Eclipse	Reapp. *		7	25	55·4
I. Transit	Ingress	23	1	33	
I. Shadow	Ingress		2	21	
II. Occult.	Disapp.		2	24	
I. Transit	Egress		3	53	
III. Transit	Ingress		4	37	
I. Shadow	Egress		4	41	
II. Eclipse	Reapp. *		6	51	5·5
III. Shadow	Ingress *		7	51	
III. Transit	Egress *		8	17	
III. Shadow	Egress *		11	31	
I. Occult.	Disapp.		22	48	
I. Eclipse	Reapp.	24	1	54	45·9
I. Transit	Ingress		19	59	
I. Shadow	Ingress		20	50	
II. Transit	Ingress		21	9	
I. Transit	Egress		22	19	
II. Shadow	Ingress		22	48	
I. Shadow	Egress		23	9	
II. Transit	Egress	25	0	5	
II. Shadow	Egress		1	44	
IV. Occult.	Disapp. *		9	33	
IV. Occult.	Reapp.		14	20	
I. Occult.	Disapp.		17	15	
IV. Eclipse	Disapp.		17	39	53·3
I. Eclipse	Reapp.		20	23	42·7
IV. Eclipse	Reapp.		22	12	36·6
I. Transit	Ingress	26	14	26	
I. Shadow	Ingress		1[illegible]		
II. Occult.	Disapp.				
I. Transit	Egress				
I. Shadow	Egress				
III. Occult.	Disapp.				
II. Eclipse	Reapp.				
III. Eclipse	Reapp.				
I. Occult.	Disapp				
I. Eclipse	Reapp				
I. Transit	Ingre				
I. Shadow	Ingr				
II. Transit	Ingr				

JUPITER'S SATELLITES.

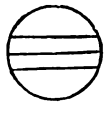
MEAN TIME.

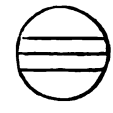
SEPTEMBER.

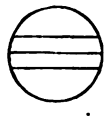
			d	h	m	s
I.	Transit	Egress	* 28	11	13	
I.	Shadow	Egress	*	12	7	
II.	Shadow	Ingress	*	12	8	
II.	Transit	Egress	†	13	17	
II.	Shadow	Egress		15	4	
I.	Occult.	Disapp.	† 29	6	9	
I.	Eclipse	Reapp.	*	9	21	28·7
I.	Transit	Ingress	30	3	20	
I.	Shadow	Ingress		4	16	

			d	h	m	s
II.	Occult.	Disapp.	30	4	43	
I.	Transit	Egress	†	5	39	
I.	Shadow	Egress	*	6	36	
III.	Transit	Ingress	*	8	6	
II.	Eclipse	Reapp.	*	9	26	41·0
III.	Transit	Egress	*	11	46	
III.	Shadow	Ingress	*	11	53	
III.	Shadow	Egress		15	33	

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.  r *

III.  r *

II.  r *

IV. d * r *

OCTOBER.

			d	h	m	s
I.	Occult.	Disapp.	1	0	36	
I.	Eclipse	Reapp.		3	50	20·4
I.	Transit	Ingress		21	47	
I.	Shadow	Ingress		22	45	
II.	Transit	Ingress		23	32	
I.	Transit	Egress	2	0	6	
I.	Shadow	Egress		1	4	
II.	Shadow	Ingress		1	26	
II.	Transit	Egress		2	28	
II.	Shadow	Egress		4	22	
I.	Occult.	Disapp.		19	3	
I.	Eclipse	Reapp.		22	19	18·4
I.	Transit	Ingress	3	16	14	
I.	Shadow	Ingress		17	13	
II.	Occult.	Disapp.		17	54	
I.	Transit	Egress		18	33	
IV.	Transit	Ingress		19	7	
I.	Shadow	Egress		19	33	

			d	h	m	s
III.	Occult.	Disapp.	3	21	42	
II.	Eclipse	Reapp.		22	44	31·6
IV.	Transit	Egress		23	56	
III.	Occult.	Reapp.	4	1	23	
III.	Eclipse	Disapp.		1	50	14·6
IV.	Shadow	Ingress		4	26	
III.	Eclipse	Reapp.		5	19	41·0
IV.	Shadow	Egress	*	9	11	
I.	Occult.	Disapp.	†	13	30	
I.	Eclipse	Reapp.		16	48	8·6
I.	Transit	Ingress	* 5	10	41	
I.	Shadow	Ingress	*	11	42	
II.	Transit	Ingress	†	12	45	
I.	Transit	Egress	†	13	0	
I.	Shadow	Egress		14	2	
II.	Shadow	Ingress		14	46	
II.	Transit	Egress		15	41	
II.	Shadow	Egress		17	42	

JUPITER'S SATELLITES.

MEAN TIME.

OCTOBER.

		d	h	m	s
I. Occult.	Disapp. *	6	7	57	
I. Eclipse	Reapp. *		11	17	6·2
I. Transit	Ingress	7	5	8	
I. Shadow	Ingress †		6	11	
II. Occult.	Disapp. *		7	5	
I. Transit	Egress *		7	28	
I. Shadow	Egress *		8	31	
III. Transit	Ingress *		11	38	
II. Eclipse	Reapp. *		12	2	26·6
III. Transit	Egress		15	19	
III. Shadow	Ingress		15	55	
III. Shadow	Egress		19	34	
I. Occult.	Disapp.	8	2	25	
I. Eclipse	Reapp. †		5	45	59·0
I. Transit	Ingress		23	35	
I. Shadow	Ingress	9	0	40	
I. Transit	Egress		1	55	
II. Transit	Ingress		1	57	
I. Shadow	Egress		2	59	
II. Shadow	Ingress		4	5	
II. Transit	Egress		4	53	
II. Shadow	Egress *		7	1	
I. Occult.	Disapp.		20	52	
I. Eclipse	Reapp.	10	0	14	57·9
I. Transit	Ingress		18	2	
I. Shadow	Ingress		19	9	
II. Occult.	Disapp.		20	16	
I. Transit	Egress		20	22	
I. Shadow	Egress		21	28	
III. Occult.	Disapp.	11	1	17	
II. Eclipse	Reapp.		1	20	22·0
III. Occult.	Reapp.		4	58	
III. Eclipse	Disapp. †		5	51	59·1
III. Eclipse	Reapp. *		9	21	0·8
I. Occult.	Disapp.		15	19	
I. Eclipse	Reapp.		18	43	49·1
IV. Occult.	Disapp.	12	1	11	
IV. Occult.	Reapp. *		6	0	
IV. Eclipse	Disapp. *		11	55	24·8
I. Transit	Ingress †		12	30	
I. Shadow	Ingress		13	37	
I. Transit	Egress		14	50	
II. Transit	Ingress		15	11	

		d	h	m	s
I. Shadow	Egress	12	15	57	
IV. Eclipse	Reapp.		16	24	56·9
II. Shadow	Ingress		17	25	
II. Transit	Egress		18	7	
II. Shadow	Egress		20	21	
I. Occult.	Disapp. *	13	9	47	
I. Eclipse	Reapp.		13	12	47·5
I. Transit	Ingress *	14	6	57	
I. Shadow	Ingress *		8	6	
I. Transit	Egress *		9	17	
II. Occult.	Disapp. *		9	29	
I. Shadow	Egress *		10	26	
II. Eclipse	Reapp.		14	38	21·8
III. Transit	Ingress		15	16	
III. Transit	Egress		18	57	
III. Shadow	Ingress		19	57	
III. Shadow	Egress		23	36	
I. Occult.	Disapp.	15	4	14	
I. Eclipse	Reapp. *		7	41	40·9
I. Transit	Ingress	16	1	25	
I. Shadow	Ingress		2	35	
I. Transit	Egress		3	44	
II. Transit	Ingress		4	24	
I. Shadow	Egress		4	55	
II. Shadow	Ingress *		6	43	
II. Transit	Egress *		7	20	
II. Shadow	Egress *		9	39	
I. Occult.	Disapp.		22	42	
I. Eclipse	Reapp.	17	2	10	40·3
I. Transit	Ingress		19	52	
I. Shadow	Ingress		21	4	
I. Transit	Egress				
II. Occult.	Disapp.				
I. Shadow	Egres				
II. Eclipse	Reap				
III. Occult.	Disa				
III. Occult.	Re				
III. Eclipse	Di				
III. Eclipse	Re				
I. Occult.	D				
I. Eclipse	I				
I. Transit					
I. Shadow					

JUPITER'S SATELLITES.

MEAN TIME.

OCTOBER.

			d	h	m	s
I.	Transit	Egress	19	16	40	
II.	Transit	Ingress		17	39	
I.	Shadow	Egress		17	52	
II.	Shadow	Ingress		20	3	
II.	Transit	Egress		20	36	
II.	Shadow	Egress		22	59	
IV.	Transit	Ingress	* 20	11	16	
I.	Occult.	Disapp.	†	11	38	
I.	Eclipse	Reapp.		15	8	30·9
IV.	Transit	Egress		16	6	
IV.	Shadow	Ingress		22	42	
IV.	Shadow	Egress	21	3	23	
I.	Transit	Ingress	*	8	47	
I.	Shadow	Ingress	*	10	1	
I.	Transit	Egress	*	11	7	
II.	Occult.	Disapp.	†	11	56	
I.	Shadow	Egress	†	12	21	
II.	Eclipse	Reapp.		17	14	26·9
III.	Transit	Ingress		18	59	
III.	Transit	Egress		22	40	
III.	Shadow	Ingress		23	59	
III.	Shadow	Egress	22	3	37	
I.	Occult.	Disapp.	*	6	6	
I.	Eclipse	Reapp.	*	9	37	24·8
I.	Transit	Ingress	23	3	15	
I.	Shadow	Ingress		4	30	
I.	Transit	Egress	†	5	35	
I.	Shadow	Egress	*	6	50	
II.	Transit	Ingress	*	6	54	
II.	Shadow	Ingress	*	9	22	
II.	Transit	Egress	*	9	50	
II.	Shadow	Egress	†	12	18	
I.	Occult.	Disapp.	24	0	34	
I.	Eclipse	Reapp.		4	6	24·8
I.	Transit	Ingress		21	43	
I.	Shadow	Ingress		22	59	
I.	Transit	Egress	25	0	3	
II.	Occult.	Disapp.		1	10	
I.	Shadow	Egress		1	18	
II.	Eclipse	Reapp.	*	6	32	33·3
III.	Occult.	Disapp.	*	8	43	
III.	Occult.	Reapp.		12	24	

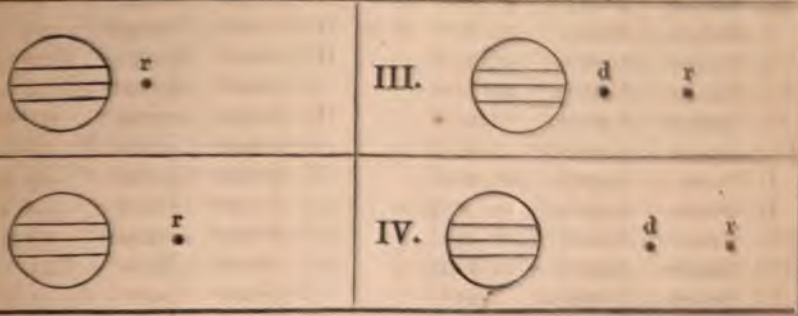
			d	h	m
III.	Eclipse	Disapp.	25	13	56
III.	Eclipse	Reapp.		17	24
I.	Occult.	Disapp.		19	2
I.	Eclipse	Reapp.		22	35
I.	Transit	Ingress	26	16	11
I.	Shadow	Ingress		17	28
I.	Transit	Egress		18	31
I.	Shadow	Egress		19	47
II.	Transit	Ingress		20	10
II.	Shadow	Ingress		22	42
II.	Transit	Egress		23	7
II.	Shadow	Egress	27	1	38
I.	Occult.	Disapp.		13	30
I.	Eclipse	Reapp.		17	4
I.	Transit	Ingress	* 28	10	39
I.	Shadow	Ingress	†	11	57
I.	Transit	Egress		12	59
I.	Shadow	Egress		14	16
II.	Occult.	Disapp.		14	25
IV.	Occult.	Disapp.		17	50
II.	Eclipse	Reapp.		19	50
IV.	Occult.	Reapp.		22	41
III.	Transit	Ingress		22	46
III.	Transit	Egress	29	2	27
III.	Shadow	Ingress		4	0
IV.	Eclipse	Disapp.	*	6	11
III.	Shadow	Egress	*	7	38
I.	Occult.	Disapp.	*	7	58
IV.	Eclipse	Reapp.	*	10	37
I.	Eclipse	Reapp.	†	11	33
I.	Transit	Ingress	† 30	5	8
I.	Shadow	Ingress	*	6	26
I.	Transit	Egress	*	7	28
I.	Shadow	Egress	*	8	45
II.	Transit	Ingress	*	9	26
II.	Shadow	Ingress		12	1
II.	Transit	Egress		12	22
II.	Shadow	Egress		14	56
I.	Occult.	Disapp.	31	2	27
I.	Eclipse	Reapp.	*	6	2
I.	Transit	Ingress		23	36

JUPITER'S SATELLITES.

MEAN TIME.

OCTOBER.

Phases of the Eclipses of the Satellites for an inverting Telescope.



NOVEMBER.

		d	h	m	s
Shadow	Ingress	1	0	54	
Transit	Egress		1	56	
Shadow	Egress		3	14	
Occult.	Disapp.		3	40	
Eclipse	Reapp. *		9	8	54·2
Occult.	Disapp.		12	34	
Occult.	Reapp.		16	15	
Eclipse	Disapp.		17	58	48·5
Occult.	Disapp.		20	55	
Eclipse	Reapp.		21	26	29·9
Eclipse	Reapp.	2	0	31	3·1
Transit	Ingress		18	4	
Shadow	Ingress		19	23	
Transit	Egress		20	24	
Shadow	Egress		21	43	
Transit	Ingress		22	43	
Shadow	Ingress	3	1	20	
Transit	Egress		1	40	
Shadow	Egress		4	16	
Occult.	Disapp.		15	23	
Eclipse	Reapp.		19	0	1·9
Transit	Ingress	4	12	32	
Shadow	Ingress		13	52	
Transit	Egress		14	52	
Shadow	Egress		16	12	
Occult.	Disapp.		16	56	
Eclipse	Reapp.		22	27	6·8
Transit	Ingress	5	2	38	

		d	h	m	s
III. Transit	Egress *	5	6	19	
III. Shadow	Ingress *		8	2	
I. Occult.	Disapp. *		9	52	
III. Shadow	Egress		11	39	
I. Eclipse	Reapp.		13	28	56·1
IV. Transit	Ingress †	6	4	27	
I. Transit	Ingress *		7	1	
I. Shadow	Ingress *		8	21	
IV. Transit	Egress *		9	18	
I. Transit	Egress *		9	21	
I. Shadow	Egress †		10	40	
II. Transit	Ingress		12	0	
II. Shadow	Ingress		14	39	
II. Transit	Egress		14	57	
IV. Shadow	Ingress		16	59	
II. Shadow	Egress		17	35	
IV. Shadow	Egress		[illegible]		
I. Occult.	Disapp.				
I. Eclipse	Reapp				6·2
I. Transit	Ing				
I. Shadow	In				
I. Transit	E				
I. Shadow	I				
II. Occult.					
II. Eclipse					·5
III. Occult.					
III. Occult.					
III. Eclips					·9

JUPITER'S SATELLITES.

MEAN TIME.

NOVEMBER.

			d	h	m	s
I.	Occult.	Disapp.	8	22	49	
III.	Eclipse	Reapp.	9	1	28	37·2
I.	Eclipse	Reapp.		2	26	48·9
I.	Transit	Ingress		19	58	
I.	Shadow	Ingress		21	19	
I.	Transit	Egress		22	18	
I.	Shadow	Egress		23	38	
II.	Transit	Ingress	10	1	18	
II.	Shadow	Ingress		3	59	
II.	Transit	Egress		4	15	
II.	Shadow	Egress *		6	54	
I.	Occult.	Disapp.		17	18	
I.	Eclipse	Reapp.		20	55	47·5
I.	Transit	Ingress	11	14	27	
I.	Shadow	Ingress		15	48	
I.	Transit	Egress		16	47	
I.	Shadow	Egress		18	7	
II.	Occult.	Disapp.		19	30	
II.	Eclipse	Reapp.	12	1	3	40·9
III.	Transit	Ingress *		6	35	
III.	Transit	Egress †		10	17	
I.	Occult.	Disapp.		11	47	
III.	Shadow	Ingress		12	4	
I.	Eclipse	Reapp.		15	24	41·6
III.	Shadow	Egress		15	41	
I.	Transit	Ingress *	13	8	55	
I.	Shadow	Ingress †		10	17	
I.	Transit	Egress		11	15	
I.	Shadow	Egress		12	36	
II.	Transit	Ingress		14	37	
II.	Shadow	Ingress		17	17	
II.	Transit	Egress		17	33	
II.	Shadow	Egress		20	13	
I.	Occult.	Disapp. *	14	6	15	
I.	Eclipse	Reapp. *		9	53	41·3
IV.	Occult.	Disapp.		11	31	
IV.	Occult.	Reapp.		16	21	
IV.	Eclipse	Disapp.	15	0	27	21·9
I.	Transit	Ingress		3	24	
I.	Shadow	Ingress †		4	45	
IV.	Eclipse	Reapp. †		4	49	19·2
I.	Transit	Egress *		5	44	
I.	Shadow	Egress *		7	5	

			d	h	m	s
II.	Occult.	Disapp. *	15	8	48	
II.	Eclipse	Reapp.		14	22	4
III.	Occult.	Disapp.		20	29	
III.	Occult.	Reapp.	16	0	10	
I.	Occult.	Disapp.		0	44	
III.	Eclipse	Disapp.		2	3	27
I.	Eclipse	Reapp. †		4	22	33
III.	Eclipse	Reapp. *		5	30	9
I.	Transit	Ingress		21	53	
I.	Shadow	Ingress		23	14	
I.	Transit	Egress	17	0	13	
I.	Shadow	Egress		1	34	
II.	Transit	Ingress		3	56	
II.	Shadow	Ingress *		6	37	
II.	Transit	Egress *		6	52	
II.	Shadow	Egress *		9	33	
I.	Occult.	Disapp.		19	13	
I.	Eclipse	Reapp.		22	51	31
I.	Transit	Ingress	18	16	22	
I.	Shadow	Ingress		17	43	
I.	Transit	Egress		18	42	
I.	Shadow	Egress		20	2	
II.	Occult.	Disapp.		22	7	
II.	Eclipse	Reapp.	19	3	40	24
III.	Transit	Ingress †		10	38	
I.	Occult.	Disapp.		13	42	
III.	Transit	Egress		14	19	
III.	Shadow	Ingress		16	6	
I.	Eclipse	Reapp.		17	20	25
III.	Shadow	Egress		19	43	
I.	Transit	Ingress	20	10	51	
I.	Shadow	Ingress		12	12	
I.	Transit	Egress		13	11	
I.	Shadow	Egress		14	31	
II.	Transit	Ingress		17	15	
II.	Shadow	Ingress		19	56	
II.	Transit	Egress		20	11	
II.	Shadow	Egress		22	51	
I.	Occult.	Disapp. *	21	8	12	
I.	Eclipse	Reapp.		11	49	24
I.	Transit	Ingress *	22	5	20	
I.	Shadow	Ingress *		6	41	
I.	Transit	Egress *		7	40	

JUPITER'S SATELLITES.

MEAN TIME.

NOVEMBER.

		d	h	m	s
Shadow	Egress *	22	9	0	
Occult.	Disapp.		11	26	
Eclipse	Reapp.		16	58	53·6
Transit	Ingress		22	37	
Occult.	Disapp.	23	0	33	
Occult.	Disapp.		2	41	
Transit	Egress		3	27	
Occult.	Reapp.		4	14	
Eclipse	Disapp. *		6	5	21·4
Eclipse	Reapp. *		6	18	16·8
Eclipse	Reapp. †		9	31	32·2
Shadow	Ingress		11	16	
Shadow	Egress		15	50	
Transit	Ingress		23	49	
Shadow	Ingress	24	1	10	
Transit	Egress		2	9	
Shadow	Egress		3	29	
Transit	Ingress *		6	35	
Shadow	Ingress *		9	15	
Transit	Egress †		9	31	
Shadow	Egress		12	10	
Occult.	Disapp.		21	10	
Eclipse	Reapp.	25	0	47	14·1
Transit	Ingress		18	19	
Shadow	Ingress		19	39	
Transit	Egress		20	38	
Shadow	Egress		21	58	
Occult.	Disapp.	26	0	45	
Eclipse	Reapp. *		6	17	16·2
III. Transit	Ingress	26	14	44	
I. Occult.	Disapp.		15	39	
III. Transit	Egress		18	25	
I. Eclipse	Reapp.		19	16	7·3
III. Shadow	Ingress		20	8	
III. Shadow	Egress		23	44	
I. Transit	Ingress	27	12	48	
I. Shadow	Ingress		14	8	
I. Transit	Egress		15	8	
I. Shadow	Egress		16	27	
II. Transit	Ingress		19	55	
II. Shadow	Ingress		22	34	
II. Transit	Egress		22	51	
II. Shadow	Egress	28	1	29	
I. Occult.	Disapp. †		10	9	
I. Eclipse	Reapp.		13	45	5·8
I. Transit	Ingress *	29	7	17	
I. Shadow	Ingress *		8	36	
I. Transit	Egress †		9	37	
I. Shadow	Egress		10	56	
II. Occult.	Disapp.		14	5	
II. Eclipse	Reapp.		19	35	51·6
I. Occult.	Disapp. †	30	4	38	
III. Occult.	Disapp. †		4	41	
I. Eclipse	Reapp. *		8	13	57·4
III. Occult.	Reapp. *		8	22	
III. Eclipse	Disapp.		10	7	19·3
III. Eclipse	Reapp.		13	32	57·7

Phases of the Eclipses of the Satellites for an inverting Telescope.

III.

IV.

JUPITER'S SATELLITES.

MEAN TIME.

DECEMBER.

			d	h	m	s
I.	Transit	Ingress	1	1	46	
I.	Shadow	Ingress		3	5	
I.	Transit	Egress †		4	6	
I.	Shadow	Egress *		5	25	
IV.	Occult.	Disapp. *		6	8	
II.	Transit	Ingress †		9	16	
IV.	Occult.	Reapp.		10	58	
II.	Shadow	Ingress		11	53	
II.	Transit	Egress		12	12	
II.	Shadow	Egress		14	48	
IV.	Eclipse	Disapp.		18	44	39·2
IV.	Eclipse	Reapp.		23	2	12·0
I.	Occult.	Disapp.		23	7	
I.	Eclipse	Reapp.	2	2	42	53·9
I.	Transit	Ingress		20	16	
I.	Shadow	Ingress		21	34	
I.	Transit	Egress		22	36	
I.	Shadow	Egress		23	53	
II.	Occult.	Disapp.	3	3	26	
II.	Eclipse	Reapp. *		8	54	16·8
I.	Occult.	Disapp.		17	37	
III.	Transit	Ingress		18	54	
I.	Eclipse	Reapp.		21	11	46·3
III.	Transit	Egress		22	35	
III.	Shadow	Ingress	4	0	11	
III.	Shadow	Egress		3	46	
I.	Transit	Ingress		14	45	
I.	Shadow	Ingress		16	3	
I.	Transit	Egress		17	5	
I.	Shadow	Egress		18	22	
II.	Transit	Ingress		22	37	
II.	Shadow	Ingress	5	1	12	
II.	Transit	Egress		1	33	
II.	Shadow	Egress †		4	7	
I.	Occult.	Disapp.		12	6	
I.	Eclipse	Reapp.		15	40	43·9
I.	Transit	Ingress †	6	9	15	
I.	Shadow	Ingress		10	32	
I.	Transit	Egress		11	35	
I.	Shadow	Egress		12	51	
II.	Occult.	Disapp.		16	47	
II.	Eclipse	Reapp.		22	12	58·0
I.	Occult.	Disapp. *	7	6	36	
III.	Occult.	Disapp. †	7	8	53	
I.	Eclipse	Reapp.		10	9	34·9
III.	Occult.	Reapp.		12	34	
III.	Eclipse	Disapp.		14	9	23·3
III.	Eclipse	Reapp.		17	34	28·3
I.	Transit	Ingress	8	3	45	
I.	Shadow	Ingress *		5	1	
I.	Transit	Egress *		6	4	
I.	Shadow	Egress *		7	20	
II.	Transit	Ingress		11	59	
II.	Shadow	Ingress		14	31	
II.	Transit	Egress		14	55	
II.	Shadow	Egress		17	26	
I.	Occult.	Disapp.	9	1	6	
I.	Eclipse	Reapp. †		4	38	30·4
IV.	Transit	Ingress		17	38	
I.	Transit	Ingress		22	14	
IV.	Transit	Egress		22	27	
I.	Shadow	Ingress		23	30	
I.	Transit	Egress	10	0	34	
I.	Shadow	Egress		1	49	
IV.	Shadow	Ingress *		5	33	
II.	Occult.	Disapp. *		6	8	
IV.	Shadow	Egress		10	2	
II.	Eclipse	Reapp.		11	31	25
I.	Occult.	Disapp.		19	35	
III.	Transit	Ingress		23	7	
I.	Eclipse	Reapp.		23	7	21
III.	Transit	Egress	11	2	48	
III.	Shadow	Ingress †		4	12	
III.	Shadow	Egress *		7	47	
I.	Transit	Ingress		16	44	
I.	Shadow	Ingress		17	59	
I.	Transit	Egress		19	4	
I.	Shadow	Egress		20	18	
II.	Transit	Ingress	12	1	20	
II.	Shadow	Ingress †		3	49	
II.	Transit	Egress †		4	16	
II.	Shadow	Egress *		6	45	
I.	Occult.	Disapp.		14	5	
I.	Eclipse	Reapp.		17	36	18
I.	Transit	Ingress	13	11	14	
I.	Shadow	Ingress		12	28	

JUPITER'S SATELLITES.

MEAN TIME.

DECEMBER.

		d	h	m	s
ransit	Egress	13	13	34	
hadow	Egress		14	47	
ccult.	Disapp.		19	30	
clipse	Reapp.	14	0	50	12·6
ccult.	Disapp. †		8	35	
clipse	Reapp.		12	5	8·8
ccult.	Disapp.		13	9	
ccult.	Reapp.		16	49	
clipse	Disapp.		18	12	3·0
clipse	Reapp.		21	36	33·6
ransit	Ingress *	15	5	44	
hadow	Ingress *		6	56	
ransit	Egress *		8	3	
hadow	Egress †		9	16	
ransit	Ingress		14	43	
hadow	Ingress		17	8	
ransit	Egress		17	39	
hadow	Egress		20	3	
ccult.	Disapp.	16	3	5	
clipse	Reapp. *		6	34	3·0
ransit	Ingress	17	0	13	
hadow	Ingress		1	25	
ransit	Egress		2	33	
hadow	Egress		3	45	
ccult.	Disapp. †		8	52	
clipse	Reapp.		14	8	41·9
ccult.	Disapp.		21	35	
clipse	Reapp.	18	1	2	53·6
ccult.	Disapp.		1	33	
ransit	Ingress		3	24	
ccult.	Reapp. *		6	21	
ransit	Egress *		7	4	
hadow	Ingress †		8	14	
hadow	Egress		11	49	
clipse	Disapp.		13	1	32·1
clipse	Reapp.		17	14	14·9
ransit	Ingress		18	43	
hadow	Ingress		19	54	
ransit	Egress		21	3	
hadow	Egress		22	13	
ransit	Ingress †	19	4	5	
hadow	Ingress *		6	27	
ransit	Egress *		7	1	

		d	h	m	s
II. Shadow	Egress	19	9	22	
I. Occult.	Disapp.		16	5	
I. Eclipse	Reapp.		19	31	49·1
I. Transit	Ingress	20	13	13	
I. Shadow	Ingress		14	23	
I. Transit	Egress		15	33	
I. Shadow	Egress		16	42	
II. Occult.	Disapp.		22	15	
II. Eclipse	Reapp.	21	3	27	34·6
I. Occult.	Disapp.		10	34	
I. Eclipse	Reapp.		14	0	38·3
III. Occult.	Disapp.		17	27	
III. Occult.	Reapp.		21	7	
III. Eclipse	Disapp.		22	14	14·5
III. Eclipse	Reapp.	22	1	38	9·6
I. Transit	Ingress *		7	43	
I. Shadow	Ingress †		8	52	
I. Transit	Egress		10	3	
I. Shadow	Egress		11	11	
II. Transit	Ingress		17	28	
II. Shadow	Ingress		19	46	
II. Transit	Egress		20	24	
II. Shadow	Egress		22	41	
I. Occult.	Disapp. *	23	5	4	
I. Eclipse	Reapp. †		8	29	31·2
I. Transit	Ingress	24	2	13	
I. Shadow	Ingress		3	21	
I. Transit	Egress †		4	33	
I. Shadow	Egress *		5	40	
II. Occult.	Disapp.		11	38	
II. Eclipse	Reapp.		16	46	5·4
I. Occult.	Disapp.		23	34	
I. Eclipse	Reapp.	25	2	58	20·5
III. Transit	Ingress *		7		
III. Transit	Egress		1		
III. Shadow	Ingress				
III. Shadow	Egress				
I. Transit	Ingress				
I. Shadow	Ingress				
I. Transit	Egress				
I. Shadow	Egress				
II. Transit	Ingress				
II. Shadow	Ingress				

JUPITER'S SATELLITES.

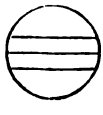
MEAN TIME.

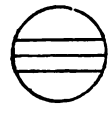
DECEMBER.

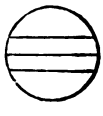
			d	h	m	s
II.	Transit	Egress	26	9	47	
II.	Shadow	Egress		11	59	
IV.	Transit	Ingress		13	22	
I.	Occult.	Disapp.		18	4	
IV.	Transit	Egress		18	9	
I.	Eclipse	Reapp.		21	27	14·7
IV.	Shadow	Ingress		23	51	
IV.	Shadow	Egress	†27	4	15	
I.	Transit	Ingress		15	13	
I.	Shadow	Ingress		16	19	
I.	Transit	Egress		17	33	
I.	Shadow	Egress		18	38	
II.	Occult.	Disapp.	28	1	1	
II.	Eclipse	Reapp. *		6	5	3·7
I.	Occult.	Disapp.		12	35	
I.	Eclipse	Reapp.		15	56	2·8
III.	Occult.	Disapp.		21	49	
III.	Occult.	Reapp.	29	1	28	

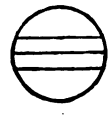
			d	h	m	s
III.	Eclipse	Disapp.	29	2	16	40
III.	Eclipse	Reapp. *		5	39	58
I.	Transit	Ingress		9	43	
I.	Shadow	Ingress		10	48	
I.	Transit	Egress		12	3	
I.	Shadow	Egress		13	7	
II.	Transit	Ingress		20	14	
II.	Shadow	Ingress		22	23	
II.	Transit	Egress		23	10	
II.	Shadow	Egress	30	1	18	
I.	Occult.	Disapp. *		7	5	
I.	Eclipse	Reapp.		10	24	54
I.	Transit	Ingress †	31	4	13	
I.	Shadow	Ingress *		5	16	
I.	Transit	Egress *		6	33	
I.	Shadow	Egress *		7	35	
II.	Occult.	Disapp.		14	25	
II.	Eclipse	Reapp.		19	23	35

Phases of the Eclipses of the Satellites for an inverting Telescope.

I.  r

III.  d r

II.  r

IV.  d r

MEAN TIME.

JANUARY.

d	h	m				
1	9	19	☉ in Perigee.			
1	12	6	♂ ☌ ♃ - - - - ♂	0	38	S.
1	15	0	♂ greatest Hel. Lat. S.			
1	22	22	☿ ☌ δ Aquarii ♒	0	2	S.
4	17	20	☿ in Aphelion.			
5	2	32	☥ ☌ ♂ - - - - ☥	18	49	N.
5	10	0	♋ in Perihelion.			
12	6	48	♀ in Aphelion.			
17	16	54	☿ ☌ ☾ - - - - ☿	2	39	N.
18	5	51	♀ ☌ ♃ - - - - ♀	0	47	S.
18	9	21	♃ ☌ ☾ - - - - ♃	4	29	N.
18	9	36	♀ ☌ ☾ - - - - ♀	3	42	N.
19	0	25	♂ ☌ ☾ - - - - ♂	4	7	N.
20	7	43	☿ in Sup. ☌ ☉			
20	14	25	♋ ☌ μ^1 Sagittar. ♒ (4^m.6)			E.
20	16	33	♅ Stationary.			
21	13	53	☥ ☌ ♀ - - - - ☥	17	58	N.
22	15	28	♋ ☌ μ^1 Sagittar. ♒	0	3	N.
24	23	12	☿ ☌ ♃ - - - - ☿	1	34	S.
25	3	17	☿ greatest Hel. Lat. S.			
25	4	47	♅ ☌ ☾ - - - - ♅	0	12	N.
25	6	9	♂ in Perihelion.			
27	8	40	♄ ☌ ☾ - - - - ♄	3	28	S.
27	13	39	☥ ☌ ☿ - - - - ☥	18	14	N.
29	14	48	♃ ☌ ☉			

FEBRUARY.

d	h	m				
1	16	9	♅ □ ☉			
1	17	29	☾ ☌ δ Aquarii ♒ (0^m.3)			E.
4	3	35	♀ greatest Hel. Lat. S.			
				°	′	
7	1	33	♀ ☌ ♂ - - - - ♀	0	31	S.
7	15	46	☿ ☌ ♂ - - - - ♂	Occulted.		
8	8	6	☿ ☌ ♀ - - - - ☿	0	37	N.
9	3	0	♄ Stationary.			
11	23	22	☥ ☌ ☉			
13	3	15	☿ in ♓			
15	6	52	♃ ☌ ☾ - - - - ♃	4	36	N.
16	23	26	♂ ☌ ☾ - - - - ♂	3	59	N.
17	5	43	☾ ☌ ☿ - - - - ☾	9	46	S.
17	7	25	♀ ☌ ☾ - - - - ♀	3	19	N.

FEBRUARY.

d	h	m				
				°	′	
17	9	31	☿ ☌ ☾ - - - - ☿	5	53	N.
17	16	56	☿ in Perihelion.			
18	1	37	☿ greatest elong.	18	5	E.
18	17	3	☾ ☌ ♀ - - - - ☾	7	11	S.
20	3	12	☿ ☌ ♀ - - - - ☿	3	20	N.
21	13	26	♅ ☌ ☾ - - - - ♅	0	8	S.
22	0	6	♆ □ ☉			
23	15	25	♄ ☌ ☾ - - - - ♄	3	37	S.
24	5	0	☿ Stationary.			
25	21	49	☾ ☌ ☿ - - - - ☾	11	59	S.
27	21	16	♄ □ ☉			
28	1	5	☿ greatest Hel. Lat. N.			
28	1	19	☿ ☌ ♂ - - - - ☿	4	39	N.

MARCH.

d	h	m				
				°	′	
4	13	42	☾ ☌ ♂ - - - - ☾	7	44	S.
5	23	32	☿ in Inf. ☌ ☉			
6	0	0	☾ greatest Hel. Lat. S.			
12	14	10	☾ ☌ ☉			
15	2	46	♃ ☌ ☾ - - - - ♃	4	41	N.
16	5	6	☿ ☌ ☾ - - - - ☿	7	2	N.
17	23	25	♂ ☌ ☾ - - - - ♂	2	59	N.
18	9	9	☿ Stationary.			
19	8	38	♀ ☌ ☾ - - - - ♀	1	30	N.
20	16	8	☉ enters ♈, Spring comm^s.			
21	0	56	♅ ☌ ☾ - - - - ♅	0	26	S.
23	2	19	♄ ☌ ☾ - - - - ♄	3	51	S.
23	12	38	☿ in ♉			
26	0	0	♆ Stationary.			
29	16	16	☿ ☌ λ Aquarii ♒ (8^m.5)			W.

APRIL

d	h	m				
1	10	15	♀ in ♓			
1	18	0	♋ ☌ π (			
2	6	0	♋ ☌ ν (			
2	8	25	☿ grea			

MEAN TIME.

APRIL.

d	h	m		°	′	
2	13	33	♃ ☌ μ Capricor.	☍ 0	2	N.
2	16	33	☿ in Aphelion.			
3	0	0	♃ ☌ μ Capricor.	☍ (0m.3)		W.
4	1	3	♑ ☌ υ Capricor.	☍ 0	7	S.
7	14	15	♀ ☌ ♅ - - - -	♀ 0	39	N.
9	15	56	♂ ☌ ☉			
11	19	25	♃ ☌ ☾ - - - -	♃ 4	42	N.
14	4	48	♑ in ♌			
14	5	8	☿ ☌ ☾ - - - -	☿ 1	8	N.
15	0	0	☤ in Aphelion.			
15	23	34	♂ ☌ ☾ - - - -	♂ 1	20	N.
17	13	29	♅ ☌ ☾ - - - -	♅ 0	38	S.
18	12	32	♀ ☌ ☾ - - - -	♀ 0	38	S.
19	16	10	♄ ☌ ☾ - - - -	♄ 4	3	S.
21	3	8	♋ ☌ ☿ - - - -	♋ 5	50	S.
22	0	43	♀ ☌ A¹ Tauri	☍ (5m.6)		W.
23	2	33	☿ greatest Hel. Lat. S.			
25	2	53	♀ ☌ υ² Tauri	☍ (0m.3)		E.
25	4	15	♀ ☌ υ² Tauri	☍ 0	2	S.

MAY.

d	h	m		°	′	
1	–	–	☾ eclip. partly vis. at Greenh.			
2	2	20	♀ ☌ ♄ - - - -	♀ 2	44	N.
4	17	0	♀ in Perihelion.			
4	18	25	♄ ☌ ι Tauri -	☍ 0	4	N.
7	10	20	♅ ☌ ☉			
7	12	19	☿ ☌ ♂ - - - -	☿ 0	35	S.
9	8	20	♃ ☌ ☾ - - - -	♃ 4	34	N.
9	15	51	♑ ☐ ☉			
10	15	3	☿ ☌ ♅ - - - -	♅ 0	4	N.
12	2	30	☿ in ♌			
13	0	23	☿ in Sup. ☌ ☉			
14	22	51	♂ ☌ ☾ - - - -	♂ 0	28	S.
15	–	–	☉ eclip. invis. at Greenh.			
15	1	11	♅ ☌ ☾ - - - -	♅ 0	47	S.
15	21	27	☿ ☌ ☾ - - - -	☿ 0	48	S.
16	16	12	☿ in Perihelion.			
16	20	28	♂ ☌ ♅ - - - -	♂ 0	12	N.
17	7	1	♄ ☌ ☾ - - - -	♄ 4	13	S.

MAY.

d	h	m		°	
18	16	33	♀ ☌ ☾ - - - -	♀ 2	
19	0	11	☤ ☍ ☉ intens. of light o		
21	17	14	♀ ☌ ε Geminor.	☍ Occu	
21	18	0	♀ ☌ ε Geminor.	☍ (0m.2	
22	10	13	♃ ☐ ☉		
25	0	45	☿ ☌ ♄ - - - -	☿ 3	
26	22	2	♀ greatest Hel. Lat. N.		
27	0	20	☿ greatest Hel. Lat. N.		
29	2	28	♂ in ♌		

JUNE.

d	h	m		°	
5	14	10	☿ ☌ ε Geminor.	☍ (3m.2	
5	17	59	♃ ☌ ☾ - - - -	♃ 4	17
6	2	28	☿ ☌ ε Geminor.	☍ 0	4
10	10	22	♄ ☌ ☉		
11	11	1	♅ ☌ ☾ - - - -	♅ 0	57
12	16	42	♋ ☌ α Piscium	☍ (4m.1	
12	20	24	♂ ☌ ☾ - - - -	♂ 2	1
13	21	17	♄ ☌ ☾ - - - -	♄ 4	24
14	12	55	☿ greatest elong.	24	36
16	4	45	☿ ☌ ☾ - - - -	☿ 4	6
17	18	47	♀ ☌ ☾ - - - -	♀ 3	11
19	2	49	☤ ☐ ☉		
19	11	53	☿ in ♌		
21	12	49	☉ enters ♋, Summer cor		
22	0	20	♃ Stationary.		
27	17	51	☿ Stationary.		
29	15	48	☿ in Aphelion.		

JULY.

d	h	m		°	
2	9	36	♑ Stationary.		
3	1	18	♃ ☌ ☾ - - - -	♃ 3	58
3	16	0	☉ in Apogee.		
6	3	38	♂ ☌ ♄ - - - -	♂ 1	37
7	4	51	♀ ☌ α Leonis.	☍ (8m.6	
8	19	1	♅ ☌ ☾ - - - -	♅ 1	13
11	10	10	♄ ☌ ☾ - - - -	♄ 4	39

MEAN TIME.

JULY.

d	h	m				
11	16	3	♂ ☌ ☾ - - - - ♂	3	10	S.
11	17	19	☿ in Inf. ☌ ☉			
13	4	28	♀ ☌ ρ Leonis ♍ (7m.0)			W.
13	7	51	☿ ☌ ☾ - - - - ☿	9	36	S.
17	11	9	♀ ☌ χ Leonis ♍ (9m.8)			E.
17	15	59	♀ ☌ ☾ - - - - ♀	4	18	S.
18	16	0	☤ Stationary.			
20	1	48	☿ greatest Hel. Lat. S.			
21	8	0	☾ ☌ ν Ceti - - ♍ (5m.1)			W.
21	23	41	♀ in ♌			
22	8	39	☿ Stationary.			
22	22	17	♀ greatest elong.	45	38	E.
24	0	0	☥ Stationary.			
27	2	0	♀ ☌ τ Leonis ♍	0	2	S.
27	3	43	♀ ☌ τ Leonis ♍ (0m.2)			W.
30	7	16	♃ ☌ ☾ - - - - ♃	3	45	N.

AUGUST.

d	h	m				
1	0	0	☥ ☌ ω Piscium ♍ (6m.8)			E.
				°	′	
1	2	24	☿ greatest elong.	19	19	W.
2	18	46	☾ □ ☉			
5	2	12	♅ ☌ ☾ - - - - ♅	1	32	S.
7	21	35	♄ ☌ ☾ - - - - ♄	4	58	S.
8	1	45	☿ in ♌			
9	10	18	♂ ☌ ☾ - - - - ♂	3	54	S.
10	19	18	☿ ☌ ☾ - - - - ☿	4	33	S.
12	15	28	☿ in Perihelion.			
13	4	54	♎ ☍ ☉ intens. of light			1·257
13	17	15	♅ □ ☉			
15	4	48	☤ □ ☉			
15	23	25	♀ ☌ ☾ - - - - ♀	6	25	S.
20	19	26	♃ ☍ ☉			
22	23	38	☿ greatest Hel. Lat. N.			
25	0	32	♀ in Aphelion.			
25	1	51	♀ at greatest brilliancy.			
26	4	20	☿ in Sup. ☌ ☉			
26	12	44	♃ ☌ ☾ - - - - ♃	3	45	N.
26	17	43	♅ Stationary.			
31	12	0	♑ ☌ 41 Capricor. ♍ (8m.5)			E.

SEPTEMBER.

d	h	m				
1	0	29	☥ ☌ λ Piscium ♍ (3m.7)			E.
				°	′	
1	9	44	♅ ☌ ☾ - - - - ♅	1	49	S.
4	7	51	♄ ☌ ☾ - - - - ♄	5	19	S.
7	3	57	♂ ☌ ☾ - - - - ♂	4	11	S.
7	7	0	♃ ☌ μ Capricor. ♍ (7m.2)			W.
7	23	58	♀ Stationary.			
12	0	0	☾ Stationary.			
12	3	17	☿ ☌ ☾ - - - - ☿	2	33	S.
12	20	59	♀ ☌ ☾ - - - - ♀	10	25	S.
13	10	36	☥ ☍ ☉ intens. of light			0·565
15	11	9	☿ in ♌			
16	20	16	♀ greatest Hel. Lat. S.			
16	23	41	☿ ☌ ♀ - - - - ☿	8	32	N.
22	18	22	♃ ☌ ☾ - - - - ♃	3	55	N.
22	19	28	♄ □ ☉			
23	3	0	☉ enters ♎, Autumn comm^{s}.			
25	15	5	☿ in Aphelion.			
25	15	26	☿ ☌ α Virginis ♍ (8m.4)			W.
26	19	12	♑ Stationary.			
28	16	42	☥ in ♌			
28	18	11	♅ ☌ ☾ - - - - ♅	1	57	S.
30	18	22	♀ in Inf. ☌ ☉			

OCTOBER.

d	h	m				
1	17	19	♄ ☌ ☾ - - - - ♄	5	34	S.
3	4	48	☤ ☌ ψ Scorpii ♍ (9m.3)			W.
5	18	20	☥ ☌ φ Aquarii ♍ (0m.7)			E.
5	21	41	♂ ☌ ☾ - - - - ♂	3	55	S.
9	1	55	♀ ☌ ☾ - - - - ♀			
10	18	36	☿ greatest elong			
12	9	33	♄ Stationary.			
12	18	19	☿ ☌ ☾ - - - -			
16	1	3	☿ greatest Hel.			
19	3	48	♃ Stationary.			
19	9	28	♀ Stationary.			
20	0	46	♃ ☌ ☾ - - -			
20	10	5	♂ ☌ α Leon			
22	23	29	☿ Stationar			

MEAN TIME.

OCTOBER.

d	h	m	
24	0	0	☿ greatest Hel. Lat. N.
24	–	–	☾ eclip. partly vis. at Greenʰ.
24	19	12	♄ ☌ ♃ Capricor. ⚹ (7ᵐ.8) W.
26	2	59	♅ ☌ ☾ - - - - ♅ 1 54 S.
29	1	54	♄ ☌ ☾ - - - - ♄ 5 38 S.
30	19	9	♀ ☍ ☉ intens. of light 0·861

NOVEMBER.

d	h	m		°	′	
3	0	49	☿ in Inf. ☌ ☉			
3	15	31	♂ ☌ ☾ - - - - ♂	3	0	S.
3	16	0	☿ Stationary.			
4	1	0	☿ in ♐			
5	16	8	♀ ☌ ☾ - - - - ♀	4	12	S.
5	20	10	♀ at greatest brilliancy.			
8	9	33	☿ ☌ ☾ - - - - ☿	1	34	N.
8	14	43	☿ in Perihelion.			
9	–	–	☉ eclip. invis. at Greenʰ.			
11	7	3	♅ ☍ ☉			
11	20	12	☿ Stationary.			
11	20	40	♂ ☌ ϰ Leonis ⚹ (3ᵐ.7) W.			
12	3	3	♀ in ♐			
13	22	26	♃ □ ☉			
15	2	41	♃ ☌ ♃ - - - - ♃	6	14	S.
16	8	56	♃ ☌ ☾ - - - - ♃	4	5	N.
16	11	29	♃ □ ☉			
17	21	15	♂ ☌ σ Leonis ⚹	0	4	S.
18	5	46	♂ ☌ σ Leonis ⚹ (0ᵐ.7) W.			
18	22	51	☿ greatest Hel. Lat. N.			
19	12	41	☿ greatest elong. 19 33 W.			

NOVEMBER.

d	h	m		°
22	10	49	♅ ☌ ☾ - - - - ♅	1
23	0	0	♀ ☌ θ Virginis ⚹ (4ᵐ	
25	5	46	♃ ☌ μ Capricor. ⚹ (5ᵐ	
25	8	59	♄ ☌ ☾ - - - - ♄	5
30	12	0	♂ greatest Hel. Lat. N	

DECEMBER.

d	h	m		°
2	8	19	♂ ☌ ☾ - - - - ♂	1
4	19	16	☿ □ ☉	
5	2	16	♀ ☌ ☾ - - - - ♀	1
7	22	52	☿ ☌ ☾ - - - - ☿	3
10	12	28	♀ ☌ κ Virginis ⚹ (3ᵐ	
11	9	7	♀ greatest elong. 46	
12	10	22	☿ in ♓	
13	20	22	♃ ☌ ☾ - - - - ♃	3
15	13	0	♀ in Perihelion.	
18	11	29	♄ ☍ ☉	
19	16	44	♅ ☌ ☾ - - - - ♅	1
21	20	48	☉ enters ♑, Winter co	
22	2	20	☿ ☌ ☉	
22	13	56	♄ ☌ ☾ - - - - ♄	5
22	14	22	☿ in Aphelion.	
23	15	0	♂ ☌ η Virginis ⚹ (8ᵐ	
24	0	0	♀ Stationary.	
26	9	10	☿ ☌ ☿ - - - - ☿	11
28	11	0	♂ ☌ γ Virginis ⚹ (5ᵐ	
28	15	39	♂ □ ☉	
30	21	25	♂ ☌ ☾ - - - - ♂	0
31	0	32	☉ in Perigee.	
31	10	36	☿ in Sup. ☌ ☉	

ELEMENTS FOR DETERMINING THE GEOCENTRIC POSITION, MAGNITUDE, AND APPEARANCE OF SATURN'S RING.

Mean Noon.		p	a	b	a'	b'	l	l'
		° ′	″	″	″	″	° ′	° ′
Jan.	1	−4 23·3	45·92	−20·27	30·54	−13·48	−26 11·5	−26 31·4
—	21	4 15·9	44·73	19·74	29·75	13·13	26 11·6	26 34·5
Feb.	10	4 13·3	43·22	19·12	28·74	12·71	26 14·9	26 37·3
Mar.	2	4 16·6	41·65	18·50	27·70	12·30	26 21·6	26 39·8
—	22	4 25·2	40·20	17·95	26·73	11·94	26 31·2	26 42·0
April	11	4 37·9	39·00	17·51	25·94	11·65	26 41·2	26 44·0
May	1	4 53·7	38·11	17·20	25·35	11·44	26 49·6	26 45·6
—	21	5 10·9	37·57	17·01	24·98	11·31	26 55·1	26 46·9
June	10	5 28·3	37·38	16·93	24·86	11·26	26 56·3	26 48·0
—	30	5 44·7	37·55	16·98	24·97	11·29	26 53·1	26 48·8
July	20	5 59·5	38·07	17·14	25·31	11·40	26 46·1	26 49·3
Aug.	9	6 11·7	38·92	17·43	25·88	11·59	26 36·6	26 49·3
—	29	6 21·0	40·09	17·85	26·66	11·87	26 26·7	26 49·3
Sept.	18	6 26·9	41·51	18·40	27·61	12·24	26 18·4	26 48·7
Oct.	8	6 29·5	43·07	19·04	28·64	12·66	26 13·9	26 48·0
—	28	6 28·4	44·60	19·73	29·66	13·12	26 14·5	26 46·9
Nov.	17	6 24·0	45·86	20·34	30·50	13·53	26 20·0	26 45·6
Dec.	7	6 16·7	46·60	20·79	30·99	13·82	26 28·6	26 44·0
—	27	6 7·9	46·65	20·93	31·02	13·92	26 39·3	26 42·0
—	32	−6 5·5	46·55	−20·91	30·96	−13·91	−26 41·7	−26 41·6

p denotes the inclination of the Northern semi-minor axes of the Rings to the circle of Declination ; + East, −West.

a the apparent outer *major* axis of the outer Ring.

b ———— outer *minor* axis of the outer Ring ; + No ible,
− S ble.

a' ———— inner *major* axis of the inner Ring.

b' ———— inner *minor* axis of the inner Ring.

l the elevation of the Earth above the plane of the R n ;
+ North, − South.

l' the elevation of the Sun above the plane of the R ;
+ North, − South.

MEAN TIME OF HIGH WATER AT LONDON BRIDGE,

Reckoning from Noon of each Day.

Day of the Month	JANUARY.		FEBRUARY.		MARCH.		APRIL.		MAY.		JUNE.	
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
1	0 59	13 22	2 15	14 33	1 17	13 38	2 0	14 14	1 53	14 7	2 35	14 56
2	1 44	14 3	2 52	15 9	1 58	14 15	2 29	14 46	2 24	14 43	3 16	15 37
3	2 24	14 44	3 25	15 42	2 33	14 48	2 59	15 13	2 58	15 16	4 0	16 24
4	3 2	15 19	3 56	16 11	3 4	15 18	3 30	15 44	3 34	15 51	4 48	17 12
5	3 39	15 55	4 27	16 43	3 32	15 45	3 59	16 16	4 11	16 31	5 39	18 8
6	4 13	16 31	4 57	17 13	4 0	16 15	4 33	16 49	4 52	17 15	6 37	19 8
7	4 47	17 4	5 27	17 46	4 30	16 44	5 6	17 27	5 37	18 5	7 41	20 15
8	5 20	17 38	6 2	18 21	5 1	17 14	5 46	18 10	6 36	19 7	8 52	21 28
9	5 57	18 17	6 40	19 1	5 32	17 50	6 36	19 5	7 45	20 27	9 59	22 28
10	6 36	18 56	7 22	19 48	6 9	18 29	7 40	20 24	9 13	21 55	11 2	23 32
11	7 17	19 42	8 19	20 56	6 52	19 17	9 17	22 5	10 33	23 10	11 59	—
12	8 12	20 43	9 38	22 21	7 47	20 28	10 52	23 34	11 39	—	0 27	12 51
13	9 17	21 49	11 8	23 53	9 16	22 5	—	12 6	0 5	12 30	1 15	13 38
14	10 25	23 2	—	12 29	10 57	23 44	0 36	13 0	0 52	13 17	2 1	14 21
15	11 38	—	1 3	13 29	—	12 22	1 23	13 44	1 37	13 58	2 43	15 3
16	0 9	12 40	1 57	14 21	0 53	13 20	2 3	14 23	2 19	14 39	3 22	15 40
17	1 9	13 38	2 46	15 11	1 46	14 8	2 44	15 3	2 59	15 18	3 59	16 18
18	2 3	14 29	3 33	15 54	2 28	14 51	3 21	15 40	3 36	15 54	4 37	16 54
19	2 55	15 21	4 14	16 36	3 10	15 32	3 57	16 15	4 13	16 32	5 14	17 34
20	3 47	16 9	4 56	17 16	3 49	16 7	4 34	16 51	4 51	17 10	5 54	18 16
21	4 33	16 56	5 34	17 55	4 27	16 45	5 11	17 31	5 32	17 52	6 38	19 0
22	5 20	17 43	6 13	18 32	5 3	17 20	5 52	18 12	6 17	18 41	7 23	19 50
23	6 4	18 28	6 53	19 14	5 38	17 57	6 36	19 1	7 7	19 37	8 18	20 52
24	6 49	19 12	7 38	20 10	6 18	18 40	7 33	20 13	8 10	20 46	9 21	21 50
25	7 36	20 1	8 48	21 28	7 3	19 30	8 58	21 40	9 24	21 57	10 18	22 46
26	8 30	21 5	10 13	22 59	8 4	20 49	10 20	23 0	10 25	22 55	11 16	23 45
27	9 40	22 17	11 42	—	9 35	22 22	11 33	—	11 21	23 49	12 12	—
28	10 56	23 36	0 23	12 52	11 8	23 49	0 3	12 23	—	12 11	0 38	13 2
29	—	12 11	- -	- -	—	12 23	0 44	13 1	0 33	12 51	1 30	13 52
30	0 43	13 8	- -	- -	0 46	13 7	1 20	13 37	1 13	13 34	2 15	14 41
31	1 32	13 55	- -	- -	1 26	13 43	- -	- -	1 55	14 14	- -	- -

If the time of High Water be required, according to the *civil* mode of reckoning:

1. *For the Morning Tide:*—With the day of the month *preceding* the given date, take the time opposite thereto from the 2nd column of the month, and diminish it by 12 hours.

2. *For the Afternoon Tide:*—With the given date, take the time opposite thereto *from the* 1st column of the month.

MEAN TIME OF HIGH WATER AT LONDON BRIDGE,

Reckoning from Noon of each Day.

Day of the Month	JULY.		AUGUST.		SEPTEMBER.		OCTOBER.		NOVEMBER.		DECEMBER.	
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
1	3 6	15 32	4 31	16 54	5 31	17 51	5 39	17 59	6 50	19 23	7 19	19 48
2	3 55	16 19	5 18	17 42	6 12	18 32	6 23	18 49	8 4	20 48	8 25	21 1
3	4 45	17 9	6 3	18 25	6 55	19 20	7 19	19 54	9 31	22 11	9 36	22 8
4	5 35	18 1	6 48	19 12	7 51	20 27	8 44	21 28	10 48	23 19	10 37	23 6
5	6 28	18 55	7 36	20 2	9 11	21 57	10 15	23 0	11 48	—	11 33	23 59
6	7 20	19 50	8 33	21 10	10 41	23 26	11 38	—	0 11	12 30	—	12 20
7	8 20	20 49	9 46	22 25	—	12 6	0 9	12 33	0 48	13 4	0 39	12 58
8	9 23	21 52	11 6	23 45	0 35	12 58	0 52	13 10	1 21	13 37	1 19	13 38
9	10 22	22 58	—	12 22	1 22	13 43	1 28	13 43	1 51	14 8	1 58	14 20
10	11 31	—	0 49	13 17	2 1	14 16	1 58	14 11	2 26	14 41	2 40	14 58
11	0 2	12 32	1 40	14 1	2 31	14 47	2 26	14 40	2 57	15 16	3 21	15 42
12	0 58	13 23	2 20	14 38	3 0	15 13	2 53	15 9	3 32	15 51	4 4	16 27
13	1 48	14 10	2 56	15 11	3 30	15 42	3 25	15 40	4 10	16 29	4 49	17 13
14	2 30	14 51	3 28	15 42	3 56	16 11	3 54	16 11	4 51	17 13	5 39	18 5
15	3 10	15 28	3 58	16 12	4 26	16 38	4 26	16 44	5 37	18 3	6 34	19 2
16	3 45	16 4	4 27	16 42	4 54	17 8	5 3	17 23	6 34	19 8	7 33	20 5
17	4 20	16 37	4 55	17 13	5 26	17 42	5 45	18 7	7 46	20 32	8 40	21 15
18	4 52	17 10	5 27	17 44	6 4	18 26	6 36	19 8	9 12	21 53	9 47	22 22
19	5 28	17 44	6 2	18 19	6 50	19 21	7 50	20 40	10 32	23 5	10 55	23 28
20	6 4	18 22	6 39	19 0	7 58	20 47	9 30	22 18	11 33	23 59	11 57	—
21	6 41	19 2	7 24	19 51	9 34	22 23	11 2	23 35	—	12 24	0 24	12 48
22	7 22	19 48	8 29	21 8	11 14	23 52	—	12 4	0 47	13 12	1 14	13 39
23	8 12	20 45	9 51	22 35	—	12 25	0 29	12 53	1 34	13 56	2 4	14 26
24	9 19	21 52	11 20	—	0 53	13 17	1 15	13 34	2 16	14 36	2 47	15 7
25	10 25	23 2	0 2	12 33	1 38	14 0	1 54	14 17	2 56	15 18	3 29	15 48
26	11 40	—	1 4	13 32	2 21	14 42	2 35	14 56	3 37	15 57	4 7	16 27
27	0 13	12 44	1 56	14 21	3 2	15 22	3 17	15 35	4 17	16 37	4 44	17 3
28	1 12	13 42	2 44	15 8	3 42	16 2	3 55	16 14	4 57	17 19	5 22	17 41
29	2 9	14 33	3 29	15 49	4 20	16 40	4 33	16 54	5 40	18 3	6 2	18 19
30	2 58	15 22	4 10	16 31	4 59	17 18	5 14	17 36	6 27	18 50	6	1
31	3 46	16 8	4 52	17 11	- -	- -	5 58	18 24	- -	- -		

Example:—Required the Mean Time of High Water at London Morning and Afternoon of Jan. 19, 1855.

1. Opposite the day *preceding*, viz. 18, and in the 2nd column, is $14^h\ 29^m$, which, being diminished by 12^h, gives $2^h\ 29^m$ for th Water in the Morning.

2. Opposite the given date, and in the 1st column, under J which is the Time of High Water in the Afternoon.

TIME OF HIGH WATER, ON THE FULL AND CHANGE OF THE MOON, AT THE UNDERMENTIONED PORTS AND PLACES.

PLACE.	SITUATION.	Time of High Water. h m	PLACE.	SITUATION.	Time of High Water. h m
Aberdeen Bar	Scotland	1 11	Chausey Islands	France	6 13
Aberdovy	Wales	7 30	Cherbourg	France	7 58
Aberystwith	Wales	7 30	Chichester Harbour	England	11 30
Achill Head	Ireland	6 0	Christchurch Harbour	England	8 50
Agnes (St.)	Scilly Isles	4 30	Clear Cape	Ireland	4 0
Air Point	Isle of Man	11 7	Coquet Island	England	2 45
Aldborough	England	10 45	Cordonan	France	3 56
Alderney Pier	English Channel	6 45	Cork Harbour	Ireland	4 30
Amlwch Port	Anglesea	10 30	Cornwall Cape	England	4 30
Antwerp	Netherlands	4 25	Cowes	Isle of Wight	10 45
Arran Isle	Scotland	11 15	Cromartie	Scotland	11 45
Arundel Bar	England	11 15	Cuckolds Point	River Thames	2 1
Ballyshannon Bar	Ireland	5 30	Cuxhaven	Germany	1 0
Balta	Shetland	9 45	Dartmouth Harbour	England	6 5
Baltimore	Ireland	3 45	Deal	England	11 15
Banff	Scotland	0 41	Dee (River)	Scotland	0 45
Bantry Bay	Ireland	3 46	Dielette Harbour	France	6 45
Bardsey Island	Wales	8 0	Dieppe	France	11 5
Barmouth	Wales	7 55	Dingle Bay	Ireland	3 30
Barnstaple Bar	England	5 30	Donaghadee Pier	Ireland	9 15
Beachy Head	England	11 50	Donegal Bar	Ireland	5 5
Beaumaris	Wales	10 26	Douglas's Harbour	Isle of Man	11 10
Belfast	Ireland	10 5	Dover Pier	England	11 10
Berwick	England	2 18	Downing's Bay Sheephaven	Ireland	5 20
Blakeney Harbour	England	6 50	Downs (Stream)	England	2 45
Blythe	England	2 45	Dublin Bar	Ireland	11 12
Bolt Head	England	5 45	Dunbar	Scotland	2 20
Bordeaux	France	6 52	Duncansby Head	Scotland	8 15
Boston	England	7 15	Dundalk Bar	Ireland	11 0
Boulogne	France	11 26	Dundee	Scotland	2 35
Brehat Island	France	5 52	Dungarvon	Ireland	4 30
Brest Harbour	France	3 46	Dungeness	England	10 50
Bridgewater	England	6 45	Dunkerque	France	0 15
Bridlington	England	4 30	Eddystone	English Chan.	5 15
Bridport	England	6 0	Exmouth Bar	England	6 25
Brielle	Netherlands	3 0	Eyemouth	Scotland	2 15
Brighton	England	11 38	Falmouth	England	5 15
Bristol	England	7 15	Fécamp	France	10 45
Brouwershaven	Netherlands	2 0	Flamboro' Head	England	4 30
Burnt Island	Scotland	2 30	Flatholm	England	6 37
Caermarthen Bar	Wales	6 10	Flushing	Netherlands	1 20
Calais	France	11 48	Fowey	England	5 30
Caldy Island	Coast of Wales	6 0	Galloway (Mull)	Scotland	11 15
Calf of Man	St. Geo. Channel	11 5	Galway Bay	Ireland	4 30
Cancale Bay	France	6 9	Glenan Islands	France	3 25
Cantire (Mull)	Scotland	9 0	Goerce (West Gat.)	Holland	1 45
Cardigan Bar	Wales	7 0	Granville	France	6 9
Carlingford Bar	Ireland	10 40	Gravelines	France	11 53
Carnarvon Bar	Wales	9 20	Gravesend	England	1 30
Chatham	England	0 54			

TIME OF HIGH WATER, ON THE FULL AND CHANGE OF THE MOON, AT THE UNDERMENTIONED PORTS AND PLACES.

PLACE.	SITUATION.	Time of High Water. h m
eenock - -	W.C.ofScotland	11 45
ernsey Pier -	English Channel	6 30
nfleet - - -	River Thames	12 0
rtlepool - -	England - -	3 45
rwich - - -	England - -	11 30
stings - - -	England - -	10 36
vre de Grace -	France - - -	9 52
ligoland - -	German Ocean	11 45
llevoetsluis -	Holland - -	2 0
llesley Bay -	England - -	11 30
lyhead Bay -	Wales - - -	10 0
ly Island Harb.	England - -	2 30
nfleur Harbour	France - - -	9 30
rn Point - -	Jutland - -	13 44
wth Harbour -	Ireland - - -	11 8
ll - - - - -	England - -	6 0
mber River Ent.	England - -	5 30
wich - - -	England - -	12 0
e de Bas - -	France - - -	4 50
rsey (St. Aubin's)	English Channel	6 10
nmare River -	Ireland - -	3 30
ng's Road - -	Bristol Channel	6 45
ngstown Harb.	Ireland - -	11 12
nsale Harbour	Ireland - -	4 30
rkcudbright -	Scotland - -	11 15
Hougue Harb.	France - - -	8 45
nd's End - -	England - -	4 30
th Pier - -	Scotland - -	2 22
rwick Harbour	Shetland - -	10 30
vis Islands -	Scotland - -	6 0
erpool Dock -	England - -	11 22
ndon Bridge -	River Thames	2 7
rgate Pier -	England - -	0 5
lford Haven Ent.	Wales - - -	5 45
nehead Pier -	England - -	6 30
ntrose - - -	Scotland - -	1 45
rlaix - - -	N. C. of France	5 15
edles Point -	Isle of Wight -	9 45
wcastle - -	England - -	4 0
whaven - -	England - -	11 50
wport - - -	Wales - - -	6 45
uport - - -	France - - -	11 45
re Light (Stream)	River Thames	1 9
ordness - -	England - -	10 40
end - - -	Flanders - -	0 55
nbroke Dock Yd.	Wales - - -	6 4
tland Frith -	Scotland - -	10 30
zance - - -	England - -	4 30

PLACE.	SITUATION.	Time of High Water. h m
Peterhead - - -	Scotland -	0 45
Plymouth Dock Yard	England -	5 33
Portland Race (Stream)	England -	9 15
Portland Road - -	England -	6 15
Port Patrick - -	Scotland -	11 0
Portsmouth Dock Yd.	England -	11 40
Ramsgate Harbour	England -	11 20
Rathlin I., Church Bay	N. C. of Irel.	9 0
Rye Harbour - -	England -	10 40
Salcombe - - -	England -	5 50
Saltees - - - -	Ireland - -	5 40
Scalloway - - -	Shetland -	9 45
Scarborough - -	England -	4 25
Scilly Islands - -	England -	4 32
Selsea Harbour - -	England -	11 15
Shannon Mouth - -	Ireland - -	3 50
Sheerness Dock Yard	England -	0 39
Shields - - - -	England -	3 0
Shoreham Harbour	England -	11 15
Skerries - - - -	Ireland - -	4 45
Sligo Bay, Ballisadare	Ireland - -	5 59
Solebay - - - -	England -	10 30
Southampton - -	England -	11 40
Spithead (Stream) -	England -	9 30
Spurn Point - - -	England -	5 20
St. Helen's Harbour	England -	11 0
St. Ives - - - -	England -	4 30
St. Malo - - - -	France - -	6 5
Stromness - - -	Orkneys -	9 0
Sunderland - - -	England -	3 0
Swansea Bay - -	Wales - -	5 56
Tay Bar - - - -	Scotland -	2 5
Tees River Bar - -	England -	3 30
Terschelling, West -	Holland -	8 40
Texel, Helder Road } E. Stream - - - }	Holland -	9 0
Torbay - - - -	England -	6 5
Tralee Bay - -	land - -	3 45
Tynemouth Bar	nd -	2 50
Waterford Ha	- -	5 50
Wexford Ha	- -	7
Weymouth	d -	6
Whitby -	-	
Wick - -	-	
Wicklow -	-	
Wisbeach	-	
Wranger	ad	
Yarmouth	-	
Youghall	-	

TABLE,

SHOWING THE MEAN TIME OF THE GREATEST LIBRATION OF THE MOON'S APPARENT DISC.

1855:	d	h	m	
Jan.	12	3	27	S.E.
	24	5	30	S.W.
Feb.	9	9	23	S.E.
	21	12	57	S.W.
Mar.	9	4	49	S.E.
	21	18	16	S.W.
Apr.	4	21	22	S.E.
	18	15	51	S.W.
May	1	6	57	S.E.
	15	22	33	S.W.
	28	14	17	S.E.
June	11	8	17	S.W.
	25	10	44	S.E.
July	8	2	24	S.W.
	23	13	45	S.E.
Aug.	4	19	55	S.W.
	20	19	0	S.E.
Sept.	1	23	2	S.W.
	17	21	24	S.E.
	30	4	29	S.W.
Oct.	15	9	46	S.E.
	28	7	23	S.W.
Nov.	10	16	1	S.E.
	25	1	25	S.W.
Dec.	7	9	49	S.E.
	21	22	55	S.W.

The Moon's Libration is here supposed to take place in the plane of her Orbit :—and by the time of the greatest Libration of her Apparent Disc is to be understood the instant at which, to an observer at the centre of the Earth, the variation of the Disc from its mean state has attained its maximum.

The right-hand column indicates the quadrant of the Moon's Disc in which the Libration takes place, and in which the greatest change of the Moon's surface will become visible.

TABLE,

SHOWING THE ILLUMINATED PORTION OF THE DISCS OF VENUS AND MARS.

1855.	VENUS.	MARS.
Jan. 15	0·991	0·987
Feb. 14	0·968	0·994
Mar. 15	0·929	0·999
Apr. 15	0·865	1·000
May 15	0·780	0·998
June 15	0·667	0·992
July 15	0·531	0·982
Aug. 15	0·343	0·969
Sept. 15	0·078	0·952
Oct. 15	0·066	0·934
Nov. 15	0·337	0·917
Dec. 15	0·521	0·905

The numbers given in this Table represent the versed sines of the illuminated portion of the Discs, the apparent Diameters of the Planets being considered as *unity*.

TABLE,
Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limiting Parallels.
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	Latitude. ° °
Jan. 1	139 Tauri - -	5½	14 27 50	5 49 0·54	N. 25 55 57·9	N. 31 59	85 N. 12 N.
3	υ Geminor.	5	10 22 54	7 26 59·69	27 12 53·1	S. 52 24	16 S. 63 S.
4	ψ³ Cancri -	4	2 19 24	8 1 43·49	25 56 41·4	S. 40 9	0 64 S.
4	λ Cancri -	6	7 4 23	8 11 55·07	N. 24 28 32·8	N. 23 5	70 N. 2 S.
6	η Leonis -	3½	11 50 58	9 59 25·63	N. 17 28 4·3	N. 12 34	56 N. 23 S.
8	ν Virginis -	4½	16 51 59	11 38 24·32	N. 7 20 29·7	S. 18 32	25 N. 60 S.
9	γ Virginis -	4	23 29 58	12 34 18·43	S. 0 39 12·1	N. 40 32	86 N. 5 S.
10	θ Virginis -	4½	14 39 24	13 2 26·12	S. 4 45 48·3	N. 73 1	85 N. 36 N.
12	λ Virginis -	4	1 59 54	14 11 15·17	S. 12 42 3·4	N. 54 35	77 N. 9 N.
12	δ Libræ - -	6	17 2 29	14 42 39·20	15 23 27·9	16 6	52 N. 28 S.
12	α² Libræ - -	2½	17 7 47	14 42 50·57	15 26 9·7	N. 17 39	53 N. 27 S.
13	ν¹ Libræ - -	5	0 21 44	14 58 31·57	S. 15 41 27·6	S. 58 50	20 S. 90 S.
13	κ Libræ - -	5	15 51 46	15 33 34·46	S. 19 12 18·3	S. 31 43	5 N. 78 S.
13	λ Libræ - -	4	20 40 59	15 44 53·92	19 43 46 5	S. 52 59	17 S. 90 S.
13	δ Scorpii -	3	23 33 10	15 51 44·32	22 12 17·7	N. 65 18	68 N. 24 N.
14	ω² Scorpii -	4½	2 30 58	15 58 52·83	S. 20 28 22·3	S. 68 53	38 S. 90 S.
14	ρ Ophiuchi	5	9 50 16	16 16 52·09	S. 23 6 29·0	N. 19 1	45 N. 25 S.
15	A Ophiuchi	4½	5 4 50	17 6 24·16	26 23 6·6	N. 67 1	64 N. 28 N.
15	θ Ophiuchi	3½	7 35 6	17 13 4·50	24 51 3·1	S. 40 2	12 S. 90 S.
20	ψ³ Aquarii -	5	22 49 12	23 10 20·81	S. 9 58 36·5	S. 17 34	25 N. 59 S.
20	ψ³ Aquarii -	5	23 17 10	23 11 23·56	S. 10 24 21·3	N. 15 26	54 N. 29 S.
21	27 Piscium -	5	17 28 36	23 51 13·70	4 21 47·8	S. 59 36	12 S. 90 S.
21	29 Piscium -	5	18 56 50	23 54 22·37	S. 3 50 13·2	S. 67 42	22 S. 90 S.
23	μ Piscium -	4½	13 40 7	1 22 34·61	N. 5 23 35·7	N. 46 48	90 N. 1 N.
23	ο Piscium -	5	21 10 34	1 37 43·75	N. 8 25 32·2	S. 24 27	21 N. 65 S.
25	URANUS -	-	4 46 40	2 41 40·12	15 20 3·1	S. 12 0	32 N. 48 S.
25	σ Arietis -	6	5 40 5	2 43 29·13	14 28 55·5	N. 5[illegible]	[illegible] N. 10 N.
26	A¹ Tauri - -	5	16 36 38	3 56 7·67	N. 21 40 59·6	S.	39 S.
27	υ¹ Tauri - -	5	2 41 20	4 17 38·26	N. 22 28 56·4		; S.
27	τ Tauri - -	5	10 4 2	4 33 32·97	22 40 34·9		N.
28	125 Tauri - -	6	12 9 15	5 30 45·74	25 48 46·6		S.
28	136 Tauri - -	4½	18 13 8	5 44 13·46	N. 27 34 29·1		
30	υ Geminor.	5	16 30 34	7 26 59·96	N. 27 12 54·[illegible]		
31	ψ³ Cancri -	4	8 30 11	8 1 43·84	25 56 41·[illegible]		S.
31	λ Cancri -	6	13 15 49	8 11 55·45	24 28 32·[illegible]		S.
Feb. 2	η Leonis -	3½	18 2 7	9 59 26·24	N. 17 28 2·[illegible]		S.

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Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limiting Parallel
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	°
Feb. 4	ν Virginis -	4½	23 2 6	11 38 25·08	N. 7 20 25·5	S. 32 23	12 N. 78
6	γ Virginis -	4	5 50 36	12 34 19·27	S. 0 39 17·4	N. 24 3	68 N. 21
6	*k* Virginis -	6	15 36 53	12 52 11·89	3 1 43·5	29 31	75 N. 16
6	θ Virginis -	4½	21 10 28	13 2 26·97	S. 4 45 53·6	N. 55 40	85 N. 11
7	*m* Virginis -	5½	14 0 41	13 34 0·40	S. 7 58 15·6	N. 13 10	54 N. 31
8	λ Virginis -	4	9 11 6	14 11 16·07	12 42 8·5	N. 36 33	76 N. 9
9	α^2 Libræ - -	2½	0 42 54	14 42 51·52	15 26 14·4	S. 0 5	37 N. 43
9	ν^1 Libræ - -	5	8 9 28	14 58 32·49	S. 15 41 32·0	S. 76 17	51 S. 90
10	κ Libræ - -	5	0 8 49	15 33 35·40	S. 19 12 22·2	S. 48 17	12 S. 90
10	λ Libræ - -	4	5 7 40	15 44 54·87	19 43 50·2	S. 69 12	39 S. 90
10	δ Scorpii -	3	8 5 38	15 51 45·28	22 12 21·1	N. 49 19	68 N. 5
10	19 Scorpii -	5½	16 39 18	16 11 54·26	S. 23 48 54·7	N. 64 41	66 N. 25
10	ρ Ophiuchi	5	18 43 53	16 16 52·99	S. 23 6 31·7	N. 3 54	31 N. 39
11	A Ophiuchi	4½	14 38 22	17 6 25·03	26 23 8·0	N. 53 54	64 N. 11
11	θ Ophiuchi	3½	17 13 44	17 13 5·35	24 51 4·5	S. 52 52	26 S. 90
13	φ Sagittarii	4½	0 22 56	18 36 34·36	S. 27 8 13·6	N. 1 6	15 N. 42
13	σ Sagittarii	3	3 53 47	18 46 14·99	S. 26 28 26·2	S. 36 19	16 S. 87
13	τ Sagittarii	4	8 6 2	18 57 51·56	27 52 45·8	N. 54 9	62 N. 10
13	*h*³ Sagittarii	4½	18 56 29	19 27 51·18	25 12 5·0	S. 74 3	54 S. 90
18	29 Piscium -	5	5 24 51	23 54 22·21	S. 3 50 13·9	S. 55 19	6 S. 90
19	*e* Piscium -	5	12 26 21	1 0 52·97	N. 4 52 47·5	S. 68 50	23 S. 85
19	μ Piscium -	4½	22 46 51	1 22 34·31	5 23 34·4	N. 63 37	90 N. 18
20	ο Piscium -	5	6 2 9	1 37 43·41	8 25 30·7	S. 7 12	37 N. 48
21	URANUS -	-	13 26 21	2 43 22·23	N. 15 28 37·2	N. 7 40	51 N. 30
22	A^1 Tauri - -	5	23 33 3	3 56 7·26	N. 21 40 59·0	N. 7 25	51 N. 23
23	ν^1 Tauri - -	5	9 26 11	4 17 37·86	22 28 56·1	43 8	90 N. 13
23	ν^3 Tauri - -	6	9 53 20	4 18 37·20	22 40 3·3	N. 35 33	90 N. 5
25	136 Tauri - -	4½	0 29 36	5 44 13·12	N. 27 34 30·0	S. 51 51	14 S. 62
26	υ Geminor.	5	22 41 11	7 26 59·83	N. 27 12 55·6	S. 41 7	1 S. 63
27	φ Geminor.	5	6 46 44	7 44 37·95	27 8 18·1	66 45	43 S. 63
27	ψ^3 Cancri -	4	14 42 24	8 1 43·79	25 56 43·3	S. 32 31	9 N. 58
Mar. 2	η Leonis -	3½	0 17 59	9 59 26·48	N. 17 28 2·2	N. 5 39	49 N. 30
2	42 Leonis -	6	7 52 10	10 14 3·35	N. 15 42 17·3	N. 27 55	75 N. 10
2	B.A.C. 3579	6	11 32 17	10 21 4·56	15 4 52·6	N. 23 25	69 N. 15
4	ν Virginis -	4½	5 5 34	11 38 25·56	7 20 23·3	S. 39 4	6 N. 82
4	*b* Virginis -	5½	12 49 15	11 52 32·37	N. 4 27 38·9	N. 27 47	74 N. 16

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				Apparent R. A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	Latitude. ° °
Mar. 5	γ Virginis -	4	11 42 37	12 34 19·84	S. 0 39 20·8	N.13 30	57 N. 31 S.
6	θ Virginis -	4½	2 57 46	13 2 27·62	4 45 57·6	43 28	76 N. 2 S.
7	λ Virginis -	4	14 56 0	14 11 16·82	12 42 12·7	N.21 32	60 N. 23 S.
8	α^3 Libræ - -	2½	6 32 35	14 42 52·31	S. 15 26 18·5	S. 15 47	23 N. 59 S.
9	κ Libræ - -	5	6 14 31	15 33 36·27	S. 19 12 25·6	S. 64 23	32 S. 90 S.
9	δ Scorpii -	3	14 19 20	15 51 46·17	22 12 24·3	N.33 14	62 N. 11 S.
10	ρ Ophiuchi	5	1 10 21	16 16 53·94	23 6 34·5	S. 12 0	17 N. 55 S.
10	A Ophiuchi	4½	21 34 48	17 6 25·96	S. 26 23 9·6	N.38 41	61 N. 6 S.
11	θ Ophiuchi	3½	0 14 37	17 13 6·30	S. 24 51 6·0	S. 67 57	46 S. 90 S.
11	3 Sagittarii	5	10 12 7	17 38 25·64	27 46 19·1	N.62 53	62 N. 24 N.
12	φ Sagittarii	4½	8 24 32	18 36 35·22	27 8 13·0	S. 12 1	4 N. 56 S.
12	σ Sagittarii	3	12 2 50	18 46 15·83	S. 26 28 25·5	S. 49 9	28 S. 90 S.
12	τ Sagittarii	4	16 24 6	18 57 52·39	S. 27 52 44·7	N.41 40	60 N. 3 S.
15	ε Capricor.	5	2 9 30	21 28 56·22	20 6 56·1	S. 8 23	25 N. 51 S.
15	κ Capricor.	5	4 24 16	21 34 32·18	S. 19 31 38·2	S. 16 29	19 N. 59 S.
19	ο Piscium -	5	16 27 17	1 37 43·20	N. 8 25 30·0	N. 3 17	46 N. 39 S.
20	π Arietis -	5	22 4 39	2 41 11·22	N.16 51 31·2	S. 75 32	40 S. 73 S.
21	URANUS -	-	0 55 53	2 47 21·59	15 47 19·7	N.25 46	71 N. 14 S.
22	A^1 Tauri - -	5	8 15 0	3 56 6·81	21 40 58·0	21 26	67 N. 11 S.
22	A^2 Tauri - -	6	8 31 50	3 56 44·29	N.21 36 53·6	N.28 7	76 N. 5 S.
22	υ^1 Tauri - -	5	17 52 19	4 17 37·40	N.22 28 55·3	N.57 13	90 N. 28 N.
23	B.A.C. 1518	6	7 5 14	4 47 25·31	24 21 22·6	40 2	90 N. 13 N.
23	k Tauri - -	6	7 54 22	4 49 16·59	24 49 25·7	N.17 7	62 N. 9 S.
24	136 Tauri - -	4½	8 3 9	5 44 12·63	N.27 34 30·2	S. 38 15	3 N. 61 S.
26	ι Geminor.	4	1 2 20	7 16 43·33	N.28 5 2·3	S. 67 19	45 S. 62 S.
26	υ Geminor.	5	5 41 2	7 26 59·42	27 12 57·2	S. [illegible]	13 N. 50 S.
26	ε Geminor.	6	9 27 9	7 35 16·47	26 7 37·6	N. [illegible]	71 N. 1 N.
26	φ Geminor.	5	13 43 54	7 44 37·58	N.27 8 19·7	[illegible]	19 S. 63 S.
26	ψ^3 Cancri -	4	21 37 45	8 1 43·45	N.25 56 45·[illegible]	[illegible]	21 N. [illegible]
29	η Leonis -	3½	7 14 3	9 59 26·39	17 28 [illegible]	[illegible]	57 N. [illegible]
29	42 Leonis -	6	14 48 48	10 14 3·29	15 [illegible]	[illegible]	86 N.
31	ν Virginis -	4½	11 58 39	11 38 25·70	N. [illegible]	[illegible]	8 N.
Apr. 1	γ Virginis -	4	18 22 59	12 34 20·13	S. [illegible]	[illegible]	55 N.
2	θ Virginis -	4½	9 28 37	13 2 27·97	[illegible]	[illegible]	84 N.
3	λ Virginis -	4	20 59 27	14 11 17·35	[illegible]	[illegible]	54 S.
4	α^3 Libræ - -	2½	12 23 59	14 42 52·91	[illegible]	[illegible]	10 S.

TABLE,

Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limit Paral
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
						☾	Latitu
1855.			h m s	h m s	° ′ ″	′ ″	°
Apr. 5	κ Libræ - -	5	11 50 39	15 33 36·99	S. 19 12 28·2	S. 73 17	47 S.
5	δ Scorpii -	3	19 51 42	15 51 46·94	22 12 26·9	N. 24 2	53 N.
6	ρ Ophiuchi	5	6 39 12	16 16 54·74	23 6 36·7	S. 21 33	9 N.
6	25 Scorpii -	6	15 27 54	16 37 59·90	S. 25 15 47·5	N. 37 10	62 N.
7	A Ophiuchi	4½	3 2 55	17 6 26·88	S. 26 23 11·0	N. 28 43	50 N.
7	3 Sagittarii	5	15 44 9	17 38 26·56	27 46 19·8	52 50	62 N.
7	B.A.C. 6127	5	23 42 30	17 58 54·47	28 28 9·5	N. 71 24	62 N.
8	φ Sagittarii	4½	14 12 25	18 36 36·14	S. 27 8 12·3	S. 21 58	5 S.
8	σ Sagittarii	3	17 54 25	18 46 16·75	S. 26 28 24·5	S. 59 4	40 S.
8	τ Sagittarii	4	22 20 30	18 57 53·31	27 52 43·5	N. 31 49	48 N.
11	ε Capricor.	5	9 42 12	21 28 56·89	20 6 52·4	S. 16 4	19 N.
11	κ Capricor.	5	12 1 28	21 34 32·83	S. 19 31 34·5	S. 24 1	13 N.
13	ψ³ Aquarii -	5	5 38 16	23 10 21·33	S. 9 58 31·4	S. 11 55	31 N.
13	ψ² Aquarii -	5	6 6 41	23 11 24·08	10 24 16·0	N. 21 16	60 N.
14	27 Piscium -	5	0 23 51	23 51 13·92	4 21 44·9	S. 46 16	2 N.
14	29 Piscium -	5	1 51 34	23 54 22·56	S. 3 50 10·6	S. 53 47	5 S.
14	MERCURY -	-	5 7 29	0 1 22·86	S. 2 41 49·2	S. 68 16	20 S.
18	VENUS -	-	12 31 43	3 44 8·76	N. 20 38 9·3	N. 37 59	90 N.
18	A¹ Tauri - -	5	17 49 38	3 56 6·55	21 40 57·0	27 21	74 N.
19	υ¹ Tauri - -	5	3 16 49	4 17 37·10	N. 22 28 54·4	N. 63 26	90 N.
20	136 Tauri - -	4½	16 44 7	5 44 12·20	N. 27 34 29·7	S. 31 20	11 N.
22	ι Geminor.	4	9 4 14	7 16 42·86	28 5 2·9	60 21	27 S.
22	υ Geminor.	5	13 39 39	7 26 58·95	27 12 57·9	22 17	20 N.
22	φ Geminor.	5	21 37 29	7 44 37·12	N. 27 8 20·8	S. 48 24	9 S.
23	ψ³ Cancri -	4	5 27 13	8 1 42·99	N. 25 56 46·3	S. 14 40	28 N.
23	λ Cancri -	6	10 10 38	8 11 54·66	24 28 37·2	N. 47 7	90 N.
25	η Leonis -	3½	14 57 5	9 59 26·10	17 28 5·5	N. 18 7	63 N.
27	ν Virginis -	4½	19 53 39	11 38 25·62	N. 7 20 24·4	S. 33 56	12 N.
28	10 Virginis -	6	8 54 52	12 2 16·70	N. 2 42 35·8	N. 61 53	90 N.
29	γ Virginis -	4	2 19 0	12 34 20·17	S. 0 39 21·9	13 55	57 N.
29	38 Virginis -	6	8 28 17	12 45 47·17	2 46 0·8	51 6	87 N.
29	θ Virginis -	4½	17 21 15	13 2 28·09	S. 4 45 59·9	N. 41 37	82 N.
May 1	λ Virginis -	4	4 31 46	14 11 17·66	S. 12 42 16·8	N. 14 54	54 N.
1	α¹ Libræ - -	2½	19 42 21	14 42 53·30	15 26 22·8	S. 24 5	16 N.
2	κ Libræ - -	5	18 43 22	15 33 37·51	19 12 29·8	S. 74 42	49 S.
3	δ Scorpii -	3	2 34 54	15 51 47·54	S. 22 12 28·7	N. 22 24	51 N.

TABLE,

Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limiting Parallels.
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
						☾	Latitude.
1855.			h m s	h m s	° ′ ″	′ ″	° °
May 3	19 Scorpii -	5½	11 5 11	16 11 56·65	S. 23 49 1·7	N. 37 25	64 N. 8 S.
3	ρ Ophiuchi	5	13 9 20	16 16 55·38	23 6 38·2	S. 23 25	7 N. 69 S.
3	22 Scorpii -	6	15 1 5	16 21 25·78	24 47 36·3	N. 61 27	65 N. 20 N.
4	A Ophiuchi	4½	9 8 56	17 6 27·65	S. 26 23 12·1	N. 26 31	48 N. 18 S.
4	3 Sagittarii	5	21 36 35	17 38 27·39	S. 27 46 20·4	N. 50 29	62 N. 7 N.
5	B.A.C. 6127	5	5 27 17	17 58 55·36	28 28 9·7	N. 68 58	62 N. 35 N.
5	φ Sagittarii	4½	19 45 40	18 36 37·04	27 8 11·5	S. 24 30	7 S. 71 S.
5	σ Sagittarii	3	23 25 17	18 46 17·65	S. 26 28 23·5	S. 61 36	42 S. 90 S.
6	τ Sagittarii	4	3 48 54	18 57 54·27	S. 27 52 42·2	N. 29 16	45 N. 15 S.
8	ε Capricor.	5	15 19 6	21 28 57·73	20 6 48·1	S. 18 26	17 N. 62 S.
8	κ Capricor.	5	17 40 21	21 34 33·67	19 31 30·0	26 22	10 N. 71 S.
10	ψ¹ Aquarii -	5	12 9 10	23 10 22·00	S. 9 58 26·6	S. 13 40	29 N. 56 S.
10	ψ³ Aquarii -	5	12 38 18	23 11 24·75	S. 10 24 11·2	N. 19 32	59 N. 26 S.
11	27 Piscium -	5	7 24 37	23 51 14·51	4 21 40·6	S. 47 41	1 N. 90 S.
11	29 Piscium -	5	8 54 42	23 54 23·14	S. 3 50 6·3	55 10	7 S. 90 S.
12	e Piscium -	5	17 1 38	1 0 53·44	N. 4 52 51·1	S. 60 36	13 S. 85 S.
13	μ Piscium -	4½	3 31 15	1 22 34·63	N. 5 23 37·9	N. 74 9	90 N. 32 N.
13	o Piscium -	5	10 49 10	1 37 43·63	8 25 32·8	N. 4 50	48 N. 37 S.
18	136 Tauri - -	4½	1 30 15	5 44 12·03	27 34 28·8	S. 31 43	11 N. 52 S.
19	ι Geminor.	4	17 27 25	7 16 42·55	N. 28 5 2·7	S. 61 8	28 S. 62 S.
19	υ Geminor.	5	22 0 18	7 26 58·63	N. 27 12 57·9	S. 23 7	20 N. 43 S.
20	φ Geminor.	5	5 54 2	7 44 36·77	27 8 20·9	49 19	10 S. 63 S.
20	ψ³ Cancri -	4	13 40 8	8 1 42·64	25 56 46·7	S. 15 41	27 N. 39 S.
22	η Leonis -	3½	23 1 48	9 59 25·77	N. 17 28 7·2	N. 16 25	61 N. 20 S.
23	B.A.C. 3579	6	10 21 55	10 21 3·95	N. 15 4 57·3	N. 32 41	83 N. 6 S.
25	ν Virginis -	4½	4 20 44	11 38 25·39	N. 7 20 26·2	S. 35 55	10 N. 82 S.
26	γ Virginis -	4	11 3 25	12 34 20·05	S. 0 39 20·8	N. 12 6	55 N. 32 S.
27	θ Virginis -	4½	2 12 37	13 2 28·02	S. 4 45 59·1	N. 39 59	85 N. 6 S.
28	λ Virginis -	4	13 29 16	14 11 17·76	S. 12 42 17·1	N. 14	S.
29	α^2 Libræ - -	2½	4 36 33	14 42 53·48	15 26 23·4	S. 24	
30	κ Libræ - -	5	3 24 44	15 33 37·83	19 12 30·7	S. 7	
30	δ Scorpii -	3	11 9 44	15 51 47·90	S. 22 12 29·9	N. 2	
June 3	ρ Ophiuchi	5	21 33 47	16 16 55·82	S. 23 6 39·3	S. ?	
31	A Ophiuchi	4½	17 9 18	17 6 28·22	26 23 13·0	N.	
1	3 Sagittarii	5	5 19 39	17 38 28·07	27 46 21·1		
1	B.A.C. 6127	5	12 58 50	17 58 56·07	S. 28 28 10·1	N	

TABLE,

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Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✱.	At Greenwich Mean Time of ☌			Limiting Paralle
				Apparent R.A. of ☾ and ✱.	*Apparent* Declination of ✱.	Diff. of *Apparent* Dec. of ☾ and ✱.	
						☾	Latitud
1855.			h m s	h m s	° ′ ″	′ ″	°
June 2	φ Sagittarii	4½	2 55 32	18 36 37·84	S.27 8 11·1	S.21 33	4 S. 67
2	σ Sagittarii	3	6 29 34	18 46 18·47	26 28 22·7	S.58 32	38 S. 90
2	τ Sagittarii	4	10 46 28	18 57 55·09	27 52 41·4	N.32 29	48 N. 12
4	ε Capricor.	5	21 1 43	21 28 58·64	S.20 6 43·8	S.13 20	21 N. 56
4	κ Capricor.	5	23 21 4	21 34 34·58	S.19 31 25·7	S.21 12	15 N. 65
6	ψ³ Aquarii -	5	17 35 35	23 10 22·84	9 58 21·1	S. 7 58	34 N. 51
6	ψ³ Aquarii -	5	18 4 47	23 11 25·59	10 24 5·7	N.25 14	65 N. 21
7	27 Piscium -	5	12 57 11	23 51 15·31	S. 4 21 35·1	S.42 6	6 N. 90
7	29 Piscium -	5	14 28 3	23 54 23·94	S. 3 50 0·9	S.49 37	1 S. 90
8	e Piscium -	5	23 0 5	1 0 54·15	N. 4 52 55·7	S.55 52	8 S. 85
9	μ Piscium -	4½	9 40 32	1 22 35·32	5 23 42·3	N.78 28	90 N. 42
9	o Piscium -	5	17 6 23	1 37 44·29	N. 8 25 36·8	N. 8 50	52 N. 34
10	π Arietis -	5	23 41 50	2 41 11·92	N.16 51 33·5	S.69 4	29 S. 73
11	URANUS -	-	11 0 27	3 5 18·97	17 5 13·6	N.57 8	90 N. 19
12	A¹ Tauri - -	5	10 11 27	3 56 7·04	21 40 57·6	N.27 35	75 N. 5
16	ι Geminor.	4	1 17 50	7 16 42·51	N.28 5 1·8	S.65 55	39 S. 62
16	υ Geminor.	5	5 50 18	7 26 58·57	N.27 12 57·2	S.28 10	14 N. 49
16	φ Geminor.	5	13 43 7	7 44 36·67	27 8 20·3	54 49	18 S. 63
16	ψ² Cancri -	4	21 28 12	8 1 42·52	25 56 46·3	S.21 38	21 N. 45
19	η Leonis -	3½	6 47 51	9 59 25·51	N.17 28 8·2	N. 7 39	51 N. 28
21	ν Virginis -	4½	12 30 30	11 38 25·15	N. 7 20 27·9	S.46 0	1 S. 83
22	γ Virginis -	4	19 39 24	12 34 19·84	S. 0 39 19·2	N. 2 13	45 N. 41
23	θ Virginis -	4½	11 3 21	13 2 27·83	4 45 57·8	30 32	76 N. 15
24	λ Virginis -	4	22 53 9	14 11 17·67	S.12 42 16·5	N. 6 21	45 N. 37
25	α² Libræ - -	2½	14 11 45	14 42 53·45	S.15 26 23·2	S.31 7	9 N. 78
26	δ Scorpii -	3	20 57 34	15 51 48·02	22 12 30·6	N.19 2	48 N. 26
27	ρ Ophiuchi	5	7 21 59	16 16 56·01	23 6 40·1	S.25 25	6 N. 71
27	22 Scorpii -	6	9 11 34	16 21 26·44	S.24 47 38·6	N.59 41	65 N. 17
28	A Ophiuchi	4½	2 52 6	17 6 28·54	S.26 23 14·1	N.27 10	48 N. 18
28	3 Sagittarii	5	14 54 58	17 38 28·47	27 46 22·0	52 49	62 N. 9
28	B.A.C.6127	5	22 27 54	17 58 56·53	28 28 10·9	N.72 22	62 N. 40
29	φ Sagittarii	4½	12 10 16	18 36 38·39	S.27 8 11·3	S.19 8	1 S. 63
29	σ Sagittarii	3	15 40 3	18 46 19·04	S.26 28 22·7	S.55 45	34 S. 90
29	τ Sagittarii	4	19 51 36	18 57 55·69	27 52 41·5	N.35 43	52 N. 10
30	ω Sagittarii	5½	13 40 4	19 46 59·69	26 40 47·6	34 10	54 N. 11
30	A Sagittarii	5½	14 49 32	19 50 9·27	S.26 35 1·6	N.35 10	55 N. 11

TABLE,

Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of δ			Limiting Parallels.
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	☾ ′ ″	Latitude. ° °
July 1	B.A.C.7237	6	11 9 45	20 44 32·96	S. 24 19 19·0	N. 58 34	66 N. 13 N.
2	ε Capricor.	5	4 34 1	21 28 59·51	20 6 40·4	S. 4 24	29 N. 47 S.
2	κ Capricor.	5	6 49 22	21 34 35·44	19 31 22·1	S. 12 4	23 N. 55 S.
3	ψ^2 Aquarii -	5	23 57 23	23 10 23·75	S. 9 58 15·7	N. 4 0	44 N. 40 S.
4	ψ^3 Aquarii -	5	0 25 56	23 11 26·50	S. 10 24 0·2	N. 37 13	77 N. 11 S.
4	27 Piscium -	5	18 55 55	23 51 16·19	4 21 29·5	S. 29 32	17 N. 73 S.
4	29 Piscium -	5	20 25 16	23 54 24·82	S. 3 49 55·3	37 1	11 N. 83 S.
6	e Piscium -	5	4 34 45	1 0 55·04	N. 4 53 1·4	S. 43 29	5 N. 82 S.
6	o Piscium -	5	22 37 12	1 37 45·13	N. 8 25 41·8	N. 20 30	64 N. 23 S.
8	π Arietis -	5	5 18 35	2 41 12·75	16 51 37·3	S. 59 26	15 S. 73 S.
8	δ Arietis -	4	15 46 43	3 3 20·90	19 10 35·6	S. 70 22	34 S. 71 S.
8	URANUS -	-	19 1 18	3 10 16·25	N. 17 25 10·8	N. 72 37	90 N. 44 N.
9	A^1 Tauri -	5	16 7 36	3 56 7·75	N. 21 40 59·7	N. 34 8	86 N. 1 N.
9	A^2 Tauri -	6	16 24 35	3 56 45·23	21 36 55·3	40 46	90 N. 8 N.
10	υ^1 Tauri -	5	1 48 24	4 17 38·18	22 28 56·3	68 40	90 N. 46 N.
10	B.A.C.1518	6	15 1 13	4 47 25·84	N. 24 21 22·1	N. 49 40	90 N. 23 N.
10	*k* Tauri -	6	15 50 10	4 49 17·10	N. 24 49 24·9	N. 26 38	75 N. 0
11	136 Tauri -	4½	15 46 5	5 44 12·71	27 34 27·9	S. 32 23	10 N. 53 S.
16	η Leonis -	3½	13 46 39	9 59 25·41	17 28 8·3	2 38	41 N. 38 S.
18	ν Virginis -	4½	19 45 12	11 38 24·92	N. 7 20 29·1	S. 60 22	18 S. 83 S.
19	10 Virginis -	6	9 12 35	12 2 16·04	N. 2 42 40·4	N. 34 49	85 N. 10 S.
20	γ Virginis -	4	3 16 29	12 34 19·58	S. 0 39 17·7	S. 13 19	31 N. 57 S.
20	θ Virginis -	4½	18 55 42	13 2 27·58	4 45 56·3	N. 14 51	58 N. 30 S.
22	λ Virginis -	4	7 29 41	14 11 17·42	S. 12 42 15·5	S. 8 24	32 N. [illegible]
22	α^2 Libræ -	2½	23 9 17	14 42 53·24	S. 15 26 22·5	S. 44 57	
23	ι^1 Libræ -	5½	9 10 29	15 3 59·50	19 14 35·2	N. 62 [illegible]	
24	δ Scorpii -	3	6 36 0	15 51 47·88	22 12 30·8	N. 7 5[illegible]	
24	ρ Ophiuchi	5	17 12 39	16 16 55·91	S. 23 6 40·4	S. 35 2[illegible]	
25	A Ophiuchi	4½	13 1 41	17 6 28·54	S. 26 23 15·0	N. 19 2[illegible]	
26	3 Sagittarii	5	1 12 55	17 38 28·55	27 46 23·2	46 3[illegible]	
26	B.A.C.6127	5	8 49 34	17 58 56·66	28 28 12·2	N. 67 1[illegible]	
26	φ Sagittarii	4½	22 35 27	18 36 38·61	S. 27 8 12·1	S. 22 2[illegible]	
27	σ Sagittarii	3	2 5 27	18 46 19·29	S. 26 28 23·5	S. 58	
27	τ Sagittarii	4	6 16 50	18 57 55·98	27 52 42·4	N. 33	
27	B.A.C.6628	6	12 36 59	19 15 30·73	28 8 29·6	67	
28	B.A.C.7077	6	13 39 7	20 24 16·61	S. 25 25 47·3	N. 5[illegible]	

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Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limiti Parall
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	Latitu °
July 29	35 Capricor.	6	10 24 3	21 19 4·18	S. 21 49 4·3	N. 56 49	68 N.
29	ε Capricor.	5	14 16 44	21 29 0·11	20 6 38·6	N. 1 59	34 N. 4
29	κ Capricor.	5	16 28 59	21 34 36·06	19 31 20·2	S. 5 21	29 N. 4
31	ψ³ Aquarii -	5	8 28 46	23 10 24·49	S. 9 58 11·7	N. 16 23	56 N. 2
31	ψ³ Aquarii -	5	8 56 26	23 11 27·24	S. 10 23 56·2	N. 49 39	80 N.
Aug. 1	27 Piscium -	5	2 52 2	23 51 17·00	4 21 52·5	S. 14 44	30 N. 5
1	29 Piscium -	5	4 18 36	23 54 25·63	S. 3 49 50·2	22 34	24 N. 6
2	e Piscium -	5	11 31 24	1 0 55·88	N. 4 53 6·7	S. 27 13	20 N. 7
3	o Piscium -	5	5 6 46	1 37 46·03	N. 8 25 47·2	N. 36 58	84 N.
4	π Arietis -	5	11 13 41	2 41 13·64	16 51 41·7	S. 43 50	3 N. 7
4	δ Arietis -	4	21 33 50	3 3 21·79	19 10 39·6	S. 55 20	11 S. 7
5	A¹ Tauri -	5	21 43 32	3 56 8·61	N. 21 41 2·6	N. 47 23	90 N. 1
7	125 Tauri -	6	15 32 53	5 30 45·85	N. 25 48 46·5	N. 64 14	90 N. 4
7	136 Tauri -	4½	21 24 29	5 44 13·44	27 34 28·2	S. 23 39	19 N. 4
9	ι Geminor.	4	13 57 39	7 16 43·31	28 4 59·5	64 0	35 S. 6
9	υ Geminor.	5	18 33 18	7 26 59·31	N. 27 12 54·9	S. 27 15	15 N. 4
10	φ Geminor.	5	2 31 16	7 44 37·33	N. 27 8 17·7	S. 55 40	19 S. 6
10	ψ⁴ Cancri -	4	10 20 51	8 1 43·08	25 56 43·8	24 13	18 N. 4
15	ν Virginis -	4½	2 2 57	11 38 24·79	N. 7 20 29·5	72 8	38 S. 8
16	γ Virginis -	4	9 42 34	12 34 19·36	S. 0 39 16·6	S. 27 53	17 N. 7
17	θ Virginis -	4½	1 29 35	13 2 27·31	S. 4 45 55·0	S. 0 43	42 N. 4
18	λ Virginis -	4	14 34 33	14 11 17·09	12 42 14·2	25 4	16 N. 7
19	α² Libræ -	2½	6 33 15	14 42 52·89	15 26 21·4	61 31	24 S. 9
20	δ Scorpii -	3	14 47 22	15 51 47·54	S. 22 12 30·4	S. 7 29	23 N. 5
21	ρ Ophiuchi	5	1 41 57	16 16 55·57	S. 23 6 40·3	S. 50 10	19 S. 9
21	A Ophiuchi	4½	22 5 28	17 6 28·26	26 23 15·5	N. 6 19	28 N. 3
22	3 Sagittarii	5	10 37 38	17 38 28·31	27 46 24·1	34 40	53 N. 1
22	B.A.C. 6127	5	18 26 54	17 58 56·46	S. 28 28 13·3	N. 56 1	62 N. 1
23	φ Sagittarii	4½	8 34 5	18 36 38·48	S. 27 8 13·4	S. 32 4	13 S. 8
23	σ Sagittarii	3	12 9 6	18 46 19·18	26 28 24·6	S. 67 47	49 S. 9
23	τ Sagittarii	4	16 26 15	18 57 55·89	27 52 43·8	N. 24 49	40 N. 2
25	B.A.C. 7237	6	7 59 4	20 44 33·67	S. 24 19 19·3	N. 59 5	66 N. 1
26	ε Capricor.	5	1 6 55	21 29 0·40	S. 20 6 38·6	N. 1 34	34 N. 4
26	κ Capricor.	5	3 19 8	21 34 36·35	19 31 20·0	S. 5 23	29 N. 4
27	ψ³ Aquarii -	5	18 55 43	23 10 24·98	9 58 9·5	N. 23 7	62 N. 2
27	ψ³ Aquarii -	5	19 22 54	23 11 27·74	S. 10 23 54·1	N. 56 28	80 N.

TABLE,

Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of 6			Limiting Parallels.
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	☾ ′ ″	Latitude. ° °
Aug. 28	27 Piscium -	5	12 55 28	23 51 17·56	S. 4 21 21·4	S. 5 39	38 N. 48 S.
28	29 Piscium -	5	14 19 56	23 54 26·20	S. 3 49 47·0	12 48	32 N. 55 S.
29	*e* Piscium -	5	20 39 38	1 0 56·56	N. 4 53 11·0	S. 13 48	32 N. 56 S.
30	*o* Piscium -	5	13 41 30	1 37 46·76	N. 8 25 51·6	N. 51 42	90 N. 4 N.
31	π Arietis -	5	18 51 47	2 41 14·47	N. 16 51 45·9	S. 28 4	18 N. 63 S.
Sept. 1	δ Arietis -	4	4 53 58	3 3 22·68	19 10 43·7	39 33	7 N. 71 S.
1	π^1 Arietis -	5	9 11 7	3 12 53·65	20 37 29·6	S. 75 19	43 S. 69 S.
2	A[1] Tauri -	5	4 26 50	3 56 9·53	N. 21 41 5·8	N. 62 42	90 N. 32 N.
4	136 Tauri -	4½	3 22 36	5 44 14·35	N. 27 34 28·8	S. 10 44	33 N. 28 S.
5	47 Geminor.	6	13 23 30	7 2 24·41	27 5 30·7	N. 22 33	71 N. 3 N.
5	*i* Geminor.	4	19 45 9	7 16 44·04	28 4 58·0	S. 54 3	17 S. 62 S.
6	*v* Geminor.	5	0 20 50	7 27 0·04	N. 27 12 53·3	S. 17 42	25 N. 38 S.
6	ϕ Geminor.	5	8 19 12	7 44 38·00	N. 27 8 15·8	S. 46 47	7 S. 63 S.
6	ψ^3 Cancri -	4	16 9 36	8 1 43·70	25 56 41·9	16 3	27 N. 40 S.
9	η Leonis -	3½	1 57 52	9 59 25·79	N. 17 28 5·3	5 50	38 N. 41 S.
13	θ Virginis -	4½	7 18 45	13 2 27·15	S. 4 45 54·4	S. 9 56	34 N. 54 S.
14	λ Virginis -	4	20 25 26	14 11 16·80	S. 12 42 13·0	S. 36 53	5 N. 89 S.
15	α^2 Libræ -	2½	12 29 55	14 42 52·55	15 26 20·2	74 2	48 S. 90 S.
16	δ Scorpii -	3	21 8 37	15 51 47·12	22 12 29·4	20 34	11 N. 66 S.
17	ρ Ophiuchi	5	8 15 49	16 16 55·14	S. 23 6 39·6	S. 63 12	36 S. 90 S.
18	A Ophiuchi	4½	5 8 38	17 6 27·80	S. 26 23 15·4	S. 6 21	16 N. 50 S.
18	3 Sagittarii	5	18 2 9	17 38 27·86	27 46 24·5	N. 22 24	40 N. 22 S.
19	B.A.C. 6127	5	2 5 48	17 58 56·01	28 28 14·0	N. 44 4	62 N. 0
19	φ Sagittarii	4½	16 40 33	18 36 38·09	S. 27 8 14·4	S. 43 21	23 S. 90 S.
20	τ Sagittarii	4	0 48 40	18 57 55·51	S. 27 52 45·1	N. 13 59	30 N. 30 S.
20	B.A.C. 6628	6	7 30 13	19 15 30·33	28 8 32·6	49 38	62 N. 6 N.
20	*b* Sagittarii	5	19 54 36	19 48 5·33	27 33 2·0	73 16	62 N. 41 N.
21	B.A.C. 7077	6	9 47 49	20 24 16·52	S. 25 25 50·1	N. 45 58	65 N. 0
22	35 Capricor.	6	7 18 36	21 19 4·35	S. 21 49 6·1	N. 49 21	68 N.
22	ϵ Capricor.	5	11 17 43	21 29 0·33	20 6 39·9	S. 4 24	29 N.
22	κ Capricor.	5	13 33 19	21 34 36·30	19 31 21·2	S. 11 7	24 N
24	ψ^3 Aquarii -	5	5 50 21	23 10 25·17	S. 9 58 9·2	N. 22 31	62 N
24	ψ^3 Aquarii -	5	6 17 44	23 11 27·93	S. 10 23 53·9	N. 55 56	8
24	27 Piscium -	5	23 53 51	23 51 17·84	4 21 20·1	S. 3 47	4
25	29 Piscium -	5	1 18 12	23 54 26·49	S. 3 49 45·7	10 45	
26	*e* Piscium -	5	7 21 54	1 0 57·02	N. 4 53 13·7	S. 7 59	

TABLE,
Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R. A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limiti Parall
				Apparent R. A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	° Latitu
Sept. 27	o Piscium -	5	0 4 41	1 37 47·31	N. 8 25 54·7	N. 59 14	90 N. 1
28	π Arietis -	5	4 30 24	2 41 15·17	16 51 49·5	S. 18 28	27 N. 5
28	53 Arietis -	6	12 27 52	2 59 18·87	17 19 19·2	N. 59 22	90 N. 1
28	δ Arietis -	4	14 15 3	3 3 23·40	N. 19 10 47·1	S. 29 29	17 N. 6
28	τ¹ Arietis -	5	18 24 34	3 12 54·40	N. 20 37 32·9	S. 65 4	21 S. 6
29	A¹ Tauri -	5	13 5 34	3 56 10·35	21 41 8·5	N. 73 26	90 N. 4
30	κ Tauri -	6	11 38 46	4 49 19·73	24 49 30·4	N. 62 58	90 N. 3
Oct. 1	136 Tauri -	4½	10 45 54	5 44 15·27	N. 27 34 29·3	S. 0 2	44 N. 1
3	ι Geminor.	4	2 27 19	7 16 44·95	N. 28 4 56·3	S. 44 18	3 S. 6
3	υ Geminor.	5	6 59 58	7 27 0·90	27 12 51·5	S. 8 5	35 N. 2
3	c Geminor.	6	10 41 38	7 35 17·84	26 7 32·4	N. 42 19	90 N. 1
3	φ Geminor.	5	14 53 51	7 44 38·84	N. 27 8 13·6	S. 37 28	5 N. 6
3	ω¹ Cancri -	6	18 18 41	7 52 10·91	N. 25 47 11·2	N. 26 27	76 N.
3	ψ³ Cancri -	4	22 40 44	8 1 44·49	25 56 39·4	S. 7 1	37 N. 3
6	η Leonis -	3½	8 23 0	9 59 26·31	17 28 1·9	N. 0 11	44 N. 3
6	42 Leonis -	6	16 5 23	10 14 3·10	N. 15 42 17·7	N. 18 4	63 N. 2
8	ν Virginis -	4½	14 25 15	11 38 25·08	N. 7 20 26·1	S. 74 19	42 S. 8
14	δ Scorpii -	3	2 38 38	15 51 46·79	S. 22 12 28·2	26 22	6 N. 7
14	ρ Ophiuchi	5	13 44 50	16 16 54·78	23 6 38·6	69 15	46 S. 9
15	A Ophiuchi	4½	10 41 44	17 6 27·37	S. 26 23 14·7	S. 12 42	11 N. 5
15	3 Sagittarii	5	23 42 15	17 38 27·40	S. 27 46 24·0	N. 15 57	34 N 2
16	B.A.C. 6127	5	7 52 9	17 58 55·54	28 28 13·8	N. 37 35	56 N. 6
16	φ Sagittarii	4½	22 41 58	18 36 37·61	27 8 14·7	S. 49 48	30 S. 9
17	τ Sagittarii	4	7 0 33	18 57 55·03	S. 27 52 45·7	N. 7 35	24 N. 3
18	b Sagittarii	5	2 36 29	19 48 4·86	S. 27 33 3·4	N. 67 5	62 N. 3
19	ε Capricor.	5	19 18 48	21 29 0·03	20 6 41·8	S. 9 34	25 N. 5
19	κ Capricor.	5	21 39 19	21 34 36·01	19 31 23·1	S. 16 11	20 N. 6
21	ψ² Aquarii -	5	15 19 56	23 10 25·08	S. 9 58 10·4	N. 19 23	59 N. 2
21	ψ³ Aquarii -	5	15 48 9	23 11 27·84	S. 10 23 55·1	N. 52 49	80 N.
22	27 Piscium -	5	9 53 42	23 51 17·86	4 21 20·6	S. 5 51	38 N. 4
22	29 Piscium -	5	11 20 6	23 54 26·51	S. 3 49 46·0	12 44	33 N. 5
23	e Piscium -	5	17 55 39	1 0 57·21	N. 4 53 14·6	S. 8 9	37 N. 5
24	o Piscium -	5	10 45 11	1 37 47·60	N. 8 25 56·0	N. 59 58	90 N. 1
25	π Arietis -	5	15 4 30	2 41 15·64	16 51 51·7	S. 16 30	29 N. 5
26	δ Arietis -	4	0 42 22	3 3 23·95	19 10 49·5	27 12	19 N. 6
26	τ¹ Arietis -	5	4 48 21	3 12 54·98	N. 20 37 35·4	S. 62 40	18 S. 6

TABLE,

Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ♂ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ♂			Limiting Parallels.
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	Latitude. ° °
Oct. 26	A¹ Tauri -	5	23 9 38	3 56 11·01	N.21 41 10·4	N.76 17	90 N. 56 N.
28	136 Tauri -	4½	19 46 49	5 44 16·16	27 34 29·7	N. 3 16	47 N. 15 S.
30	ι Geminor.	4	10 35 49	7 16 45·90	28 4 54·5	S.41 4	1 N. 62 S.
30	ν Geminor.	5	15 3 26	7 27 1·84	N.27 12 49·4	S. 4 53	39 N. 25 S.
30	φ Geminor.	5	22 49 14	7 44 39·77	N.27 8 11·2	S. 34 19	9 N. 58 S.
31	ψ² Cancri -	4	6 29 0	8 1 45·45	25 56 36·5	S. 3 57	40 N. 28 S.
31	λ Cancri -	6	11 7 17	8 11 56·96	24 28 27·9	N.55 47	90 N. 30 N.
31	ν³ Cancri -	6	16 11 58	8 22 58·22	N.24 33 53·1	N.16 24	62 N. 11 S.
Nov. 1	B.A.C. 3138	6	12 23 21	9 5 22·20	N.21 52 39·0	N.15 33	61 N. 16 S.
2	η Leonis -	3½	15 45 6	9 59 27·06	17 27 57·4	N. 2 31	46 N. 34 S.
4	ν Virginis -	4½	21 51 14	11 38 25·62	N. 7 20 21·9	S.72 54	38 S. 83 S.
6	γ Virginis -	4	5 18 38	12 34 19·81	S. 0 39 20·9	S.35 2	11 N. 85 S.
6	θ Virginis -	4½	20 54 11	13 2 27·56	S. 4 45 57·5	S. 10 42	33 N. 54 S.
11	A Ophiuchi	4½	16 33 27	17 6 27·17	26 23 13·6	S. 11 53	12 N. 56 S.
12	3 Sagittarii	5	5 22 47	17 38 27·13	27 46 23·0	N.16 54	34 N. 27 S.
12	B.A.C. 6127	5	13 26 42	17 58 55·24	S.28 28 12·9	N.38 38	57 N. 5 S.
13	φ Sagittarii	4½	4 8 20	18 36 37·25	S.27 8 14·4	S.48 34	29 S. 90 S.
13	τ Sagittarii	4	12 24 7	18 57 54·66	27 52 45·5	N. 8 55	25 N. 35 S.
14	*b* Sagittarii	5	7 59 22	19 48 4·45	27 33 3·8	68 40	62 N. 33 N.
15	B.A.C. 7237	6	6 37 41	20 44 32·69	S.24 19 24·0	N.47 27	66 N. 2 N.
16	ε Capricor.	5	1 9 59	21 28 59·63	S.20 6 43·5	S. 7 32	27 N. 51 S.
16	κ Capricor.	5	3 33 20	21 34 35·62	19 31 24·8	S.14 9	22 N. 58 S.
17	ψ³ Aquarii -	5	22 21 25	23 10 24·83	9 58 12·?	N. 29	61 N. 25 S.
17	ψ¹ Aquarii -	5	22 50 33	23 11 27·59	S.10 23 57		80 N. 5 N.
18	27 Piscium -	5	17 31 29	23 51 17·68	S. 4 21		0 N. 47 S.
18	29 Piscium -	5	19 0 44	23 54 26·34	S. 3 49		4 N. 54 S.
20	*e* Piscium -	5	2 34 20	1 0 57·19	N. 4		8 N. 49 S.
20	ο Piscium -	5	19 51 7	1 37 47·67	N. 8		N. 14 N
22	π Arietis -	5	0 43 50	2 41 15·89	N.16		N. 52 S
22	53 Arietis -	6	8 41 55	2 59 19·69	17		N. 22 N
22	δ Arietis -	4	10 28 51	3 3 24·25	19		N. 60 S
22	τ¹ Arietis -	5	14 37 13	3 12 55·32	N.20		S. 69 S
23	A¹ Tauri -	5	9 4 16	3 56 11·49	N.2		52 N
24	κ Tauri -	6	7 4 46	4 49 21·15			39 N
25	136 Tauri -	4½	5 26 33	5 44 16·94			8 S
26	47 Geminor.	6	13 38 51	7 2 27·16	N		

TABLE,

Containing Elements for facilitating the Computation of Occultations of certain Stars by the Moon.

Day of the Month.	Star's Name.	Magnitude.	Greenwich *Mean Time* of *Apparent* ☌ in R.A. of ☾ and ✳.	At Greenwich Mean Time of ☌			Limiting Parallels.
				Apparent R.A. of ☾ and ✳.	*Apparent* Declination of ✳.	Diff. of *Apparent* Dec. of ☾ and ✳.	
1855.			h m s	h m s	° ′ ″	′ ″	Latitude. ° °
Nov. 26	ι Geminor.	4	19 42 44	7 16 46·82	N.28 4 53·1	S.45 30	4 S. 62 S.
27	υ Geminor.	5	0 6 16	7 27 2·80	27 12 47·7	9 28	34 N. 29 S.
27	φ Geminor.	5	7 44 59	7 44 40·75	27 8 9·0	S. 39 8	4 N. 62 S.
27	ω^1 Cancri -	6	11 3 35	7 52 12·81	N.25 47 6·1	N.24 38	73 N. 1 S.
27	ψ^3 Cancri -	4	15 17 58	8 1 46·39	N.25 56 33·9	S. 9 0	35 N. 33 S.
29	η Leonis -	3½	23 59 32	9 59 27·98	N.17 27 52·4	3 56	40 N. 40 S.
Dec. 3	γ Virginis -	4	13 48 1	12 34 20·53	S. 0 39 25·9	40 52	5 N. 90 S.
4	θ Virginis -	4½	5 29 28	13 2 28·26	S. 4 46 2·0	S. 15 55	28 N. 60 S.
5	λ Virginis -	4	18 5 23	14 11 17·46	S. 12 42 16·3	S. 43 30	1 S. 90 S.
10	τ Sagittarii	4	19 12 54	18 57 54·56	27 52 44·7	N.14 36	31 N. 30 S.
11	*b* Sagittarii	5	14 20 39	19 48 4·26	27 33 3·3	75 44	62 N. 52 N.
12	B.A.C.7077	6	4 26 54	20 24 15·44	S.25 25 52·7	N.49 50	65 N. 4 N.
13	ε Capricor.	5	6 47 41	21 28 59·33	S.20 6 44·4	N. 2 3	35 N. 42 S.
13	κ Capricor.	5	9 9 26	21 34 35·32	19 31 25·9	S. 4 26	30 N. 48 S.
14	56 Aquarii -	6	5 59 46	22 22 32·99	15 19 24·5	N.23 10	59 N. 23 S.
15	ψ^3 Aquarii -	5	3 51 1	23 10 24·53	S. 9 58 14·1	N.32 27	73 N. 16 S.
15	ψ^3 Aquarii -	5	4 20 19	23 11 27·29	S. 10 23 58·9	N.65 53	80 N. 18 N.
15	27 Piscium -	5	23 12 15	23 51 17·42	4 21 23·9	N. 6 54	50 N. 38 S.
16	29 Piscium -	5	0 42 43	23 54 26·07	S. 3 49 49·4	S. 0 1	43 N. 44 S.
17	*e* Piscium -	5	8 51 23	1 0 57·01	N. 4 53 12·7	N. 2 36	46 N. 41 S.
18	ο Piscium -	5	2 32 50	1 37 47·54	N. 8 25 54·9	N.69 0	90 N. 25 N.
19	π Arietis -	5	8 9 9	2 41 15·89	16 51 52·9	S. 11 6	34 N. 47 S.
19	δ Arietis -	4	18 8 19	3 3 24·31	19 10 51·1	23 9	22 N. 56 S.
19	τ^1 Arietis -	5	22 22 27	3 12 55·40	N.20 37 37·5	S. 59 13	15 S. 69 S.
20	32 Tauri -	6	13 51 26	3 48 22·37	N.22 3 45·0	N.22 11	68 N. 11 S.
22	136 Tauri -	4½	14 10 48	5 44 17·45	27 34 31·0	S. 2 16	41 N. 20 S.
24	ι Geminor.	4	4 32 12	7 16 47·58	28 4 52·6	51 45	12 S. 62 S.
24	υ Geminor.	5	8 55 4	7 27 3·54	N.27 12 46·8	S. 16 8	27 N. 36 S.
24	*c* Geminor.	6	12 28 51	7 35 20·49	N.26 7 27·0	N.33 48	88 N. 10 N.
24	φ Geminor.	5	16 32 13	7 44 41·54	27 8 7·8	S.46 32	5 S. 63 S.
24	ω^1 Cancri -	6	19 49 58	7 52 13·61	25 47 4·6	N.16 56	63 N. 8 S.
25	ψ^3 Cancri -	4	0 3 9	8 1 47·24	N.25 56 32·2	S. 17 6	27 N. 41 S.
27	η Leonis -	3½	8 24 46	9 59 28·93	N.17 27 47·7	S. 16 40	28 N. 52 S.
30	η Virginis -	3½	10 0 30	12 12 31·92	N. 0 8 2·7	N.69 57	90 N. 32 N.
30	Mars -	-	21 25 15	12 32 31·70	S. 1 2 32·5	S. 18 22	27 N. 63 S.
30	γ Virginis -	4	22 27 40	12 34 21·43	0 39 31·8	55 54	11 S. 90 S.
31	θ Virginis -	4½	14 20 13	13 2 29·14	S. 4 46 7·6	S. 30 28	15 N. 78 S.

TABLES FOR DETERMINING THE LATITUDE BY OBSERVATIONS OF THE POLE STAR OUT OF THE MERIDIAN.

TABLE I.

Containing the *First* Correction.

Argument:—Sidereal Time of Observation.

Sidereal Time.	Correction.	Sidereal Time.	Sidereal Time.	Correction.	Sidereal Time.
h m	° ′ ″	h m	h m	° ′ ″	h m
0 0	− 1 23 49 +	12 0	6 0	− 0 25 6 +	18 0
10	1 24 50	10	10	0 21 25	10
20	1 25 42	20	20	0 17 42	20
30	1 26 23	30	30	0 13 56	30
40	1 26 55	40	40	0 10 9	40
50	1 27 16	50	50	0 6 21	50
1 0	1 27 28	13 0	7 0	− 0 2 33 +	19 0
10	1 27 29	10	10	+ 0 1 16 −	10
20	1 27 21	20	20	0 5 4	20
30	1 27 3	30	30	0 8 54	30
40	1 26 35	40	40	0 12 41	40
50	1 25 56	50	50	0 16 27	50
2 0	1 25 8	14 0	8 0	0 20 11	20 0
10	1 24 11	10	10	0 23 52	10
20	1 23 4	20	20	0 27 31	20
30	1 21 47	30	30	0 31 7	30
40	1 20 21	40	40	0 34 39	40
50	1 18 45	50	50	0 38 8	50
3 0	1 17 1	15 0	9 0	0 41 32	21 0
10	1 15 8	10	10	0 44 51	10
20	1 13 6	20	20	0 48 5	20
30	1 10 56	30	30	0 51 14	30
40	1 8 38	40	40	0 54 16	40
50	1 6 12	50	50	0 57 13	50
4 0	1 3 39	16 0	10 0	1 0 3	22 0
10	1 0 58	10	10	1 2 46	10
20	0 58 10	20	20	1 5 22	20
30	0 55 16	30	30	1 7 50	30
40	0 52 15	40	40	1 10 11	40
50	0 49 8	50	50	1 12 24	50
5 0	0 45 56	17 0	11 0	1 14 28	
10	0 42 39	10	10	1 16 24	
20	0 39 16	20	20	1 18 12	
30	0 35 49	30	30	1 19 50	
40	0 32 18	40	40	1 21	
50	0 28 44	50	50	1 22	
6 0	− 0 25 6 +	18 0	12 0	+ 1 23	

TABLE II.

Containing the *Second* Correction. (*always to be added.*)
Arguments:—Sidereal Time and Altitude.

Sidereal Time.	Altitude. 0°	5°	10°	15°	20°	25°	30°	35°	Sidereal Time.
h m	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	h m
0 0	0 0	0 0	0 1	0 1	0 2	0 3	0 3	0 4	12 0
30	0 0	0 0	0 0	0 1	0 1	0 1	0 1	0 1	30
1 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	13 0
30	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	30
2 0	0 0	0 0	0 1	0 1	0 1	0 2	0 2	0 3	14 0
30	0 0	0 1	0 1	0 2	0 3	0 4	0 5	0 6	30
3 0	0 0	0 1	0 3	0 4	0 5	0 7	0 9	0 11	15 0
30	0 0	0 2	0 4	0 6	0 8	0 11	0 13	0 16	30
4 0	0 0	0 3	0 6	0 8	0 11	0 15	0 18	0 22	16 0
30	0 0	0 4	0 7	0 11	0 15	0 19	0 23	0 28	30
5 0	0 0	0 4	0 9	0 13	0 18	0 23	0 28	0 34	17 0
30	0 0	0 5	0 10	0 15	0 20	0 26	0 32	0 39	30
6 0	0 0	0 5	0 11	0 16	0 22	0 29	0 35	0 43	18 0
30	0 0	0 6	0 11	0 17	0 24	0 30	0 38	0 46	30
7 0	0 0	0 6	0 12	0 18	0 24	0 31	0 39	0 47	19 0
30	0 0	0 6	0 12	0 18	0 24	0 31	0 38	0 46	30
8 0	0 0	0 6	0 11	0 17	0 23	0 30	0 37	0 44	20 0
30	0 0	0 5	0 10	0 16	0 21	0 27	0 34	0 41	30
9 0	0 0	0 5	0 9	0 14	0 19	0 24	0 30	0 36	21 0
30	0 0	0 4	0 8	0 12	0 16	0 20	0 26	0 31	30
10 0	0 0	0 3	0 6	0 9	0 13	0 16	0 20	0 25	22 0
30	0 0	0 2	0 5	0 7	0 10	0 12	0 15	0 19	30
11 0	0 0	0 2	0 3	0 5	0 7	0 9	0 11	0 13	23 0
30	0 0	0 1	0 2	0 3	0 4	0 5	0 6	0 8	30
12 0	0 0	0 0	0 1	0 1	0 2	0 3	0 3	0 4	24 0

TABLE III. (*for* 1855.)

Containing the *Third* Correction. (*always to be added.*)
Arguments:—Sidereal Time and Date.

Sidereal Time.	Jan. 1.	Feb. 1.	March 1.	April 1.	May 1.	June 1.	July 1.
h	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
0	0 56	0 53	0 47	0 37	0 29	0 26	0 27
2	1 0	1 2	1 0	0 52	0 43	0 35	0 32
4	1 4	1 11	1 13	1 9	1 1	0 52	0 45
6	1 7	1 17	1 23	1 24	1 19	1 11	1 1
8	1 9	1 18	1 26	1 32	1 32	1 26	1 17
10	1 8	1 15	1 23	1 32	1 36	1 35	1 29
12	1 4	1 7	1 13	1 23	1 31	1 34	1 33
14	1 0	0 58	1 0	1 8	1 17	1 25	1 28
16	0 56	0 49	0 47	0 51	0 59	1 8	1 15
18	0 53	0 43	0 37	0 36	0 41	0 49	0 59
20	0 51	0 42	0 34	0 28	0 28	0 34	0 43
22	0 52	0 45	0 37	0 28	0 24	0 25	0 31
24	0 56	0 53	0 47	0 37	0 29	0 26	0 27

TABLE II.

Containing the *Second* Correction. (*always to be added.*)
Arguments:—Sidereal Time and Altitude.

Sidereal Time.	Altitude.								Sidereal Time.
	° 35	° 40	° 45	° 50	° 55	° 60	° 65	° 70	
h m	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	h m
0 0	0 4	0 5	0 5	0 6	0 8	0 10	0 12	0 15	12 0
30	0 1	0 1	0 2	0 2	0 2	0 3	0 4	0 5	30
1 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	13 0
30	0 0	0 1	0 1	0 1	0 1	0 1	0 1	0 2	30
2 0	0 3	0 3	0 4	0 4	0 5	0 6	0 8	0 10	14 0
30	0 6	0 7	0 8	0 10	0 12	0 15	0 18	0 23	30
3 0	0 11	0 13	0 15	0 18	0 21	0 26	0 32	0 41	15 0
30	0 16	0 19	0 23	0 27	0 33	0 40	0 49	1 3	30
4 0	0 22	0 26	0 31	0 38	0 45	0 54	1 7	1 26	16 0
30	0 28	0 34	0 40	0 48	0 57	1 10	1 26	1 50	30
5 0	0 34	0 41	0 48	0 58	1 9	1 24	1 44	2 13	17 0
30	0 39	0 47	0 56	1 6	1 19	1 36	1 59	2 33	30
6 0	0 43	0 51	1 1	1 13	1 28	1 45	2 11	2 48	18 0
30	0 46	0 55	1 5	1 18	1 33	1 53	2 20	2 59	30
7 0	0 47	0 56	1 7	1 20	1 35	1 56	2 23	3 3	19 0
30	0 46	0 56	1 6	1 19	1 34	1 54	2 22	3 2	30
8 0	0 44	0 53	1 3	1 15	1 30	1 50	2 16	2 54	20 0
30	0 41	0 49	0 58	1 10	1 23	1 41	2 5	2 40	30
9 0	0 36	0 43	0 52	1 2	1 14	1 30	1 51	2 22	21 0
30	0 31	0 37	0 44	0 52	1 3	1 16	1 34	2 1	30
10 0	0 25	0 30	0 35	0 42	0 50	1 1	1 16	1 37	22 0
30	0 19	0 22	0 27	0 32	0 38	0 46	0 57	1 13	30
11 0	0 13	0 15	0 18	0 21	0 26	0 32	0 40	0 51	23 0
30	0 8	0 9	0 11	0 13	0 16	0 19	0 24	0 31	30
12 0	0 4	0 5	0 5	0 6	0 8	0 10	0 12	0 15	24 0

TABLE III. (*for* 1855.)

Containing the *Third* Correction. (*always to be added.*)
Arguments:—Sidereal Time and Date.

Sidereal Time.	July 1.	Aug. 1.	Sept. 1.	Oct. 1.	Nov. 1.	Dec. 1.	Dec. 31.
h	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″	′ ″
0	0 27	0 34	0 44	0 56	1 7	1 15	1 19
2	0 32	0 34	0 40	0 50	1 1	1 12	1
4	0 45	0 41	0 41	0 47	0 55	1 6	
6	1 1	0 53	0 48	0 47	0 51	0 58	
8	1 17	1 7	0 58	0 51	0 48	0 51	
10	1 29	1 19	1 8	0 57	0 49	0 46	
12	1 33	1 26	1 16	1 4	0 53	0	
14	1 28	1 26	1 20	1 10	0 59	0	
16	1 15	1 19	1 19	1 13	1 5	0	
18	0 59	1 7	1 12	1 13	1 9	1	
20	0 43	0 53	1 2	1 9	1 12	1	
22	0 31	0 41	0 52	1 3	1 11	1	
24	0 27	0 34	0 44	0 56	1 7	1	

TABLE

For converting INTERVALS of MEAN SOLAR Time into Equivalent INTERVALS of SIDEREAL Time.

HOURS.		MINUTES.				SECONDS.			
Hours of Mean Time.	Equivalents in Sidereal Time.	Minutes of Mean Time.	Equivalents in Sidereal Time.	Minutes of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.
	h m s		m s		m s		s		s
1	1 0 9·8565	1	1 0·1643	31	31 5·0925	1	1·0027	31	31·0849
2	2 0 19·7130	2	2 0·3286	32	32 5·2568	2	2·0055	32	32·0876
3	3 0 29·5694	3	3 0·4928	33	33 5·4211	3	3·0082	33	33·0904
4	4 0 39·4259	4	4 0·6571	34	34 5·5853	4	4·0110	34	34·0931
5	5 0 49·2824	5	5 0·8214	35	35 5·7496	5	5·0137	35	35·0958
6	6 0 59·1388	6	6 0·9857	36	36 5·9139	6	6·0164	36	36·0986
7	7 1 8·9953	7	7 1·1499	37	37 6·0782	7	7·0192	37	37·1013
8	8 1 18·8518	8	8 1·3142	38	38 6·2424	8	8·0219	38	38·1040
9	9 1 28·7083	9	9 1·4785	39	39 6·4067	9	9·0246	39	39·1068
10	10 1 38·5647	10	10 1·6428	40	40 6·5710	10	10·0274	40	40·1095
11	11 1 48·4212	11	11 1·8070	41	41 6·7353	11	11·0301	41	41·1123
12	12 1 58·2777	12	12 1·9713	42	42 6·8995	12	12·0329	42	42·1150
13	13 2 8·1342	13	13 2·1356	43	43 7·0638	13	13·0356	43	43·1177
14	14 2 17·9906	14	14 2·2998	44	44 7·2281	14	14·0383	44	44·1205
15	15 2 27·8471	15	15 2·4641	45	45 7·3924	15	15·0411	45	45·1232
16	16 2 37·7036	16	16 2·6284	46	46 7·5566	16	16·0438	46	46·1259
17	17 2 47·5600	17	17 2·7927	47	47 7·7209	17	17·0465	47	47·1287
18	18 2 57·4165	18	18 2·9569	48	48 7·8852	18	18·0493	48	48·1314
19	19 3 7·2730	19	19 3·1212	49	49 8·0495	19	19·0520	49	49·1342
20	20 3 17·1295	20	20 3·2855	50	50 8·2137	20	20·0548	50	50·1369
21	21 3 26·9859	21	21 3·4498	51	51 8·3780	21	21·0575	51	51·1396
22	22 3 36·8424	22	22 3·6140	52	52 8·5423	22	22·0602	52	52·1424
23	23 3 46·6989	23	23 3·7783	53	53 8·7066	23	23·0630	53	53·1451
24	24 3 56·5554	24	24 3·9426	54	54 8·8708	24	24·0657	54	54·1479
		25	25 4·1069	55	55 9·0351	25	25·0685	55	55·1506
		26	26 4·2711	56	56 9·1994	26	26·0712	56	56·1533
		27	27 4·4354	57	57 9·3637	27	27·0739	57	57·1561
		28	28 4·5997	58	58 9·5279	28	28·0767	58	58·1588
		29	29 4·7640	59	59 9·6922	29	29·0794	59	59·1615
		30	30 4·9282	60	60 9·8565	30	30·0821	60	60·1643

TABLE

For converting INTERVALS of MEAN SOLAR Time into Equivalent INTERVALS of SIDEREAL Time.

FRACTIONS OF A SECOND.

Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.	Seconds of Mean Time.	Equivalents in Sidereal Time.
	s		s		s
0·01	0·01003	0·34	0·34093	0·67	0·67183
0·02	0·02006	0·35	0·35096	0·68	0·68186
0·03	0·03008	0·36	0·36099	0·69	0·69189
0·04	0·04011	0·37	0·37101	0·70	0·70192
0·05	0·05014	0·38	0·38104	0·71	0·71194
0·06	0·06016	0·39	0·39107	0·72	0·72197
0·07	0·07019	0·40	0·40110	0·73	0·73200
0·08	0·08022	0·41	0·41112	0·74	0·74203
0·09	0·09025	0·42	0·42115	0·75	0·75205
0·10	0·10027	0·43	0·43118	0·76	0·76208
0·11	0·11030	0·44	0·44120	0·77	0·77211
0·12	0·12033	0·45	0·45123	0·78	0·78214
0·13	0·13036	0·46	0·46126	0·79	0·79216
0·14	0·14038	0·47	0·47129	0·80	0·80219
0·15	0·15041	0·48	0·48131	0·81	0·81222
0·16	0·16044	0·49	0·49134	0·82	0·82225
0·17	0·17047	0·50	0·50137	0·83	0·83227
0·18	0·18049	0·51	0·51140	0·84	0·84230
0·19	0·19052	0·52	0·52142	0·85	0·85233
0·20	0·20055	0·53	0·53145	0·86	0·86235
0·21	0·21057	0·54	0·54148	0·87	0·87238
0·22	0·22060	0·55	0·55151	0·88	0·88241
0·23	0·23063	0·56	0·56153	0·89	0·89244
0·24	0·24066	0·57	0·57156	0·90	0·90246
0·25	0·25068	0·58	0·58159	0·91	0·91249
0·26	0·26071	0·59	0·59162	0·92	0·92252
0·27	0·27074	0·60	0·60164	0·93	0·93255
0·28	0·28077	0·61	0·61167	0·94	0·94257
0·29	0·29079	0·62	0·62170	0·95	0·95260
0·30	0·30082	0·63	0·63173	0·96	0·96263
0·31	0·31085	0·64	0·64175	0·97	0·97266
0·32	0·32088	0·65	0·65178	0·98	0·98268
0·33	0·33090	0·66	0·66181	0·99	0·99271

This TABLE is useful for the conversion of MEAN SOLAR into SIDEREAL Time.

Sidereal Time *required* = Sidereal Time at the *preceding* Mean Noon + the Equivalent to the *given* Mean Time.

Ex.—To convert $2^h\ 22^m\ 25^s{\cdot}62$ Mean Time at Greenwich, Jan. 2, 1855, into Sidereal Time.

	h	m	s
Sidereal Time at the *preceding* Mean Noon, viz. January 2	18	46	13·81
$2^h\ 0^m\ 0^s$	2	0	19·713
The Table gives the Equivalent 22		22	3·614
Sidereal Intervals, 25			25·069
0·62			0·623
The Sum is the Sidereal Time required	21	9	2·83

TABLE

For converting INTERVALS of SIDEREAL Time into Equivalent INTERVALS of MEAN SOLAR Time.

HOURS.		MINUTES.				SECONDS.			
Hours of Sidereal Time.	Equivalents in Mean Time.	Minutes of Sidereal Time.	Equivalents in Mean Time.	Minutes of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.
	h m s		m s		m s		s		s
1	0 59 50·1704	1	0 59·8362	31	30 54·9214	1	0·9973	31	30·9154
2	1 59 40·3409	2	1 59·6723	32	31 54·7576	2	1·9945	32	31·9126
3	2 59 30·5113	3	2 59·5085	33	32 54·5937	3	2·9918	33	32·9099
4	3 59 20·6818	4	3 59·3447	34	33 54·4299	4	3·9891	34	33·9072
5	4 59 10·8522	5	4 59·1809	35	34 54·2661	5	4·9864	35	34·9045
6	5 59 1·0226	6	5 59·0170	36	35 54·1023	6	5·9836	36	35·9017
7	6 58 51·1931	7	6 58·8532	37	36 53·9384	7	6·9809	37	36·8990
8	7 58 41·3635	8	7 58·6894	38	37 53·7746	8	7·9782	38	37·8963
9	8 58 31·5340	9	8 58·5256	39	38 53·6108	9	8·9754	39	38·8935
10	9 58 21·7044	10	9 58·3617	40	39 53·4470	10	9·9727	40	39·8908
11	10 58 11·8748	11	10 58·1979	41	40 53·2831	11	10·9700	41	40·8881
12	11 58 2·0453	12	11 58·0341	42	41 53·1193	12	11·9672	42	41·8853
13	12 57 52·2157	13	12 57·8703	43	42 52·9555	13	12·9645	43	42·8826
14	13 57 42·3862	14	13 57·7064	44	43 52·7917	14	13·9618	44	43·8799
15	14 57 32·5566	15	14 57·5426	45	44 52·6278	15	14·9591	45	44·8772
16	15 57 22·7270	16	15 57·3788	46	45 52·4640	16	15·9563	46	45·8744
17	16 57 12·8975	17	16 57·2150	47	46 52·3002	17	16·9536	47	46·8717
18	17 57 3·0679	18	17 57·0511	48	47 52·1364	18	17·9509	48	47·8690
19	18 56 53·2384	19	18 56·8873	49	48 51·9725	19	18·9481	49	48·8662
20	19 56 43·4088	20	19 56·7235	50	49 51·8087	20	19·9454	50	49·8635
21	20 56 33·5792	21	20 56·5597	51	50 51·6449	21	20·9427	51	50·8608
22	21 56 23·7497	22	21 56·3958	52	51 51·4810	22	21·9399	52	51·8580
23	22 56 13·9201	23	22 56·2320	53	52 51·3172	23	22·9372	53	52·8553
24	23 56 4·0906	24	23 56·0682	54	53 51·1534	24	23·9345	54	53·8526
		25	24 55·9044	55	54 50·9896	25	24·9318	55	54·8499
		26	25 55·7405	56	55 50·8257	26	25·9290	56	55·8471
		27	26 55·5767	57	56 50·6619	27	26·9263	57	56·8444
		28	27 55·4129	58	57 50·4981	28	27·9236	58	57·8417
		29	28 55·2490	59	58 50·3343	29	28·9208	59	58·8389
		30	29 55·0852	60	59 50·1704	30	29·9181	60	59·8362

TABLE

For converting INTERVALS of SIDEREAL TIME into Equivalent INTERVALS of MEAN SOLAR Time.

FRACTIONS OF A SECOND.

Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.	Seconds of Sidereal Time.	Equivalents in Mean Time.
	s		s		s
0·01	0·00997	0·34	0·33907	0·67	0·66817
0·02	0·01995	0·35	0·34904	0·68	0·67814
0·03	0·02992	0·36	0·35902	0·69	0·68812
0·04	0·03989	0·37	0·36899	0·70	0·69809
0·05	0·04986	0·38	0·37896	0·71	0·70806
0·06	0·05984	0·39	0·38894	0·72	0·71803
0·07	0·06981	0·40	0·39891	0·73	0·72801
0·08	0·07978	0·41	0·40888	0·74	0·73798
0·09	0·08975	0·42	0·41885	0·75	0·74795
0·10	0·09973	0·43	0·42883	0·76	0·75793
0·11	0·10970	0·44	0·43880	0·77	0·76790
0·12	0·11967	0·45	0·44877	0·78	0·77787
0·13	0·12965	0·46	0·45874	0·79	0·78784
0·14	0·13962	0·47	0·46872	0·80	0·79782
0·15	0·14959	0·48	0·47869	0·81	0·80779
0·16	0·15956	0·49	0·48866	0·82	0·81776
0·17	0·16954	0·50	0·49864	0·83	0·82773
0·18	0·17951	0·51	0·50861	0·84	0·83771
0·19	0·18948	0·52	0·51858	0·85	0·84768
0·20	0·19945	0·53	0·52855	0·86	0·85765
0·21	0·20943	0·54	0·53853	0·87	0·86762
0·22	0·21940	0·55	0·54850	0·88	0·87760
0·23	0·22937	0·56	0·55847	0·89	0·88757
0·24	0·23934	0·57	0·56844	0·90	0·89754
0·25	0·24932	0·58	0·57842	0·91	0·90752
0·26	0·25929	0·59	0·58839	0·92	0·91749
0·27	0·26926	0·60	0·59836	0·93	0·92746
0·28	0·27924	0·61	0·60833	0·94	0·93743
0·29	0·28921	0·62	0·61831	0·95	0·94741
0·30	0·29918	0·63	0·62828	0·96	0·95738
0·31	0·30915	0·64	0·63825	0·97	0·96735
0·32	0·31913	0·65	0·64823	0·98	0·97732
0·33	0·32910	0·66	0·65820	0·99	0·98730

This TABLE is useful for the conversion of SIDEREAL into MEAN SOLAR Time.

Mean Solar Time *required* = Mean Time at the *preceding* Sidereal Noon + the Equivalent to the *given* Sidereal Time.

EXAMPLE.—To convert $21^h\ 9^m\ 2''{\cdot}83$ Sidereal Time at Greenwich, Jan. 2, 1855, into Mean Time.

		h	m	s
Mean Time at the *preceding* Sidereal Noon, viz. ----- January 1 --		5	16	50·70
" Sidereal Intervals.	$21^h\ 0^m\ 0^s$	20	56	33·579
	9 0	8	58	32·526
	2			1·995
	0·83			·828
The Sum is the Mean Time required, Jan. 2 -		2	22	25·63

The Table gives the Equivalent Mean Intervals,

TABLE, SHOWING THE CORRECTION REQUIRED ON ACCOUNT OF SECOND DIFFERENCES,

In finding the Greenwich Time corresponding to a reduced Lunar Distance.

Arguments:—Approximate Interval and Difference of Proportional Logarithms.

Approximate Interval.		Difference of the Proportional Logarithms in the Ephemeris.																								
		2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46	48	50	52
h m	h m	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
0 0	3 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0 10	2 50	0	0	0	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3	3	
0 20	2 40	0	1	1	1	1	2	2	2	2	3	3	3	3	4	4	4	4	5	5	5	5	6	6	6	6	
0 30	2 30	0	1	1	2	2	2	2	3	3	3	4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9
0 40	2 20	0	1	1	2	2	3	3	3	4	4	5	5	6	6	6	7	7	8	8	9	9	10	10	10	11	11
0 50	2 10	1	1	2	2	3	3	4	4	5	5	5	6	6	7	7	8	8	9	9	10	10	11	12	12	13	13
1 0	2 0	1	1	2	2	3	3	4	4	5	6	6	7	7	8	8	9	9	10	10	11	12	12	13	13	14	14
1 10	1 50	1	1	2	2	3	4	4	5	5	6	6	7	8	8	9	9	10	11	11	12	12	13	14	14	15	15
1 20	1 40	1	1	2	3	3	4	4	5	6	6	7	7	8	9	9	10	10	11	12	12	13	14	14	15	15	16
1 30	1 30	1	1	2	3	3	4	4	5	6	6	7	8	8	9	9	10	11	11	12	12	13	14	14	15	16	16

Approximate Interval.		Difference of the Proportional Logarithms in the Ephemeris.																								
		54	56	58	60	62	64	66	68	70	72	74	76	78	80	82	84	86	88	90	92	94	96	98	100	102
h m	h m	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s
0 0	3 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0 10	2 50	4	4	4	4	4	4	4	4	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7
0 20	2 40	7	7	7	7	8	8	8	8	9	9	9	9	10	10	10	10	11	11	11	11	12	12	12	12	13
0 30	2 30	9	10	10	10	11	11	12	12	12	13	13	13	14	14	14	14	15	15	16	16	16	17	17	17	18
0 40	2 20	12	12	13	13	13	14	14	15	15	16	16	16	17	17	18	18	19	19	19	20	20	21	21	22	22
0 50	2 10	14	14	15	15	16	16	16	17	17	18	19	19	20	20	21	21	22	22	22	23	23	24	24	25	26
1 0	2 0	15	16	16	17	17	18	18	19	19	20	21	21	22	22	23	23	24	24	25	25	26	27	27	28	28
1 10	1 50	16	17	17	18	18	19	19	20	21	21	22	22	23	24	24	25	25	26	27	27	28	28	29	30	30
1 20	1 40	17	17	18	19	19	20	20	21	21	22	23	23	24	25	25	26	26	27	28	28	29	29	30	31	31
1 30	1 30	17	18	18	19	19	20	21	21	22	23	23	24	24	25	25	26	27	27	28	29	29	30	31	31	32

Approximate Interval.		Difference of the Proportional Logarithms in the Ephemeris.																								
		104	106	108	110	112	114	116	118	120	122	124	126	128	130	132	134	136	138							
h m	h m	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s	s							
0 0	3 0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0							
0 10	2 50	7	7	7	7	7	7	8	8	8	8	8	8	8	8	9	9	9	9							
0 20	2 40	13	13	13	14	14	14	14	15	15	15	15	15	16	16	16	16	17	17							
0 30	2 30	18	18	19	19	19	20	20	20	21	21	21	22	22	22	23	23	24	24							
0 40	2 20	22	23	23	24	24	25	25	25	26	26	27	27	28	28	28	29	29	30							
0 50	2 10	26	26	27	27	28	29	29	29	30	30	31	31	32	32	33	33	34	34							
1 0	2 0	29	29	30	30	31	31	32	33	33	34	34	35	35	36	37	37	38	38							
1 10	1 50	31	31	32	32	33	34	34	35	35	36	37	37	38	38	39	40	40	41							
1 20	1 40	32	33	33	34	34	35	35	36	37	38	38	39	39	40	40	41	41	42							
1 30	1 30	32	33	34	34	35	35	36	36	37	38	39	39	40	40	41	42	42	43							

The Correction is to be *added* to the approximate Greenwich Time when the Proportional Logarithms in the Ephemeris are *decreasing*, and *subtracted* when they are *increasing*.

LATITUDES AND LONGITUDES OF THE PRINCIPAL OBSERVATORIES.

The Longitudes are reckoned from the Meridian of Greenwich.
North Latitudes and *West* Longitudes are indicated by the sign +,
South Latitudes and *East* Longitudes by the sign —.

ABERDEEN - - - -	(Marischal College.)	
	Lat. +57° 8′ 57″·8	*Ast. Nach.* vol. x. page 211.
	Long. + 0h 8m 22s·78	
ABO - - - - - - -	Lat. +60° 26′ 57″	*Argelander's Observations*, vol. i. page 21, and vol. ii. pages 25, 27.
	Long. — 1h 29m 8s·8	*Ast. Nach.* vol. ix. page 264.
ALTONA - - - - -	Lat. +53° 32′ 45″·3	*Gauss on the Latitudes of Göttingen and Altona*, page 71. (Göttingen, 1828.)
	Long. — 0h 39m 46s·6	*Ast. Nach.* vol. viii. page 132.
ARMAGH - - - - -	Lat. +54° 21′ 12″·7	Communicated by the Rev. Dr. Robinson.
	Long. + 0h 26m 35s·5	
ASHURST - - - -	(R. Snow, Esq.)	
	Lat. +51° 15′ 58″	*Monthly Notices of the Royal Ast. Soc.* vol. v. page 232.
	Long. + 0h 1m 19s·1	
BERLIN - - - - -	Lat. +52° 31′ 13″·5	*Berliner Astron. Jahrbuch for* 1833, page 249.
	Long. — 0h 53m 35s·5	
——— (*New Observy.*)	Lat. +52° 30′ 16″·7	*Berliner Astron. Jahrbuch for* 1852, page 289.
	Long. — 0h 53m 35s·5	
BIRR CASTLE - - -	(The Earl of Rosse.)	
	Lat. +53° 5′ 47″	Communicated by the Earl of Rosse.
	Long. + 0h 31m 40s·9	
BONN - - - - - -	Lat. +50° 44′ 9″·1	*Ast. Nach.* vol.
	Long. — 0h 28m 27s·0	
BREMEN - - - - -	Lat. +53° 4′ 36″·0	*Ast. Nach.* vol
	Long. — 0h 35m 15s·9	This is the r given in *Ast. Nach.* vol. i. pa 392; vol. v. page 247; vol. vi
BRESLAU - - - -	Lat. +51° 6′ 56″·0	*Berliner A*
	Long. — 1h 8m 10s·0	p. 289.

LATITUDES AND LONGITUDES OF THE PRINCIPAL OBSERVATORIES.

BRUSSELS - - - - -	Lat. +50° 51′ 10″·7	*Annuaire de l'observatoire de Bruxelles, pour l'An* 1837. pages 264 and 265.
	Long. — 0h 17m 29s·0	
BUDA - - - - - -	(Ofen.)	
	Lat. +47° 29′ 12″·2	*Zeitschrift für Astronomie*, vol. iii. page 70; and *Mem. Ast. Soc.* vol i. page 280.
	Long. — 1h 16m 12s·7	*Zach's Correspond. Astron.* vol. vii. page 263; and *Zeitschrift für Astronomie*, vol. ii. page 507.
CAMBRIDGE - - - -	Lat. +52° 12′ 51″·8	*Camb. Phil. Trans.* vol. v. p. 279.
	Long. — 0h 0m 23s·54	*Camb. Phil. Trans.* vol. iii. p. 168.
CAMBRIDGE, U. S. - -	Lat. +42° 22′ 49″	*Monthly Notices of the Royal Ast. Soc.* vol. vii. page 157.
	Long. + 4h 44m 32s	
CAPE OF GOOD HOPE -	Lat. —33° 56′ 3″	*Mem. Roy. Ast. Soc.* vol. vi. page 130.
	Long. — 1h 13m 55s·0	Communicated by Mr. Henderson.
CHRISTIANIA - - -	(New Observatory.)	
	Lat. +59° 54′ 42″·4	*Ast. Nach.* vol. xii. page 283.
	Long. — 0h 42m 53s·9	*Berliner Astron. Jahrbuch*, 1852, page 289.
COPENHAGEN - - -	(University.)	
	Lat. +55° 40′ 53″·0	*Ast. Nach.* vol. v. page 366.
	Long. — 0h 50m 19s·8	*Ast. Nach.* vol. xix. page 120.
CRACOW - - - - - -	Lat. +50° 3′ 50″·0	*Ast. Nach.* vol. xvi. page 256.
	Long. — 1h 19m 51s·1	*Ast. Nach.* vol. xvi. page 352; and vol. xviii. page 392.
DANTZIC - - - - -	Lat. +54° 21′ 18″·0	*Berliner Astron. Jahrbuch*, 1852, p. 289.
	Long. — 1h 14m 45s·0	
DORPAT - - - - - -	Lat. +58° 22′ 47″·1	*Struve's Astronom. Observations*, vol. vi. page 60.
	Long. — 1h 46m 55s·0	*Bessel's Tabulæ Regiomontanæ*, page 2.
DUBLIN - - - - - -	Lat. +53° 23′ 13″	*Ast. Nach.* vol. x. page 274.
	Long. + 0h 25m 22s	
DURHAM - - - - - -	Lat. +54° 46′ 6″·2	Communicated by Professor Chevallier.
	Long. + 0h 6m 18s	
EDINBURGH - - - -	Lat. +55° 57′ 23″·2	*Ast. Soc. Not.* vol. iii. page 201.
	Long. + 0h 12m 43s·6	*Mem. Ast. Soc.* vol. iv. page 568.

LATITUDES AND LONGITUDES OF THE PRINCIPAL OBSERVATORIES.

FLORENCE - - - - -	(St. Giovanni.)	
	Lat. $+43^\circ\,46'\,41''\cdot4$	*Zach's Correspondance Astronomique*, vol. i. pages 1 to 14.
	Long. $-\,0^h\,45^m\,3^s\cdot6$	
GENEVA - - - - -	Lat. $+46^\circ\,11'\,59''\cdot4$	*Mémoire sur une nouvelle détermination sur la Latitude de Genève.* By M. Gautier. (Genève, 1830.)
	Long. $-\,0^h\,24^m\,37^s\cdot7$	*Ast. Nach.* vol. xx. page 7.
GOTHA - - - - -	(Seeberg.)	
	Lat. $+50^\circ\,56'\,5''$	*Gauss on the Latitudes of Göttingen and Altona*, page 80.
	Long. $-\,0^h\,42^m\,56^s\cdot4$	*Bessel's Tab. Reg.* page 2.
GÖTTINGEN - - - -	Lat. $+51^\circ\,31'\,48''$	*Gauss on the Latitudes of Göttingen and Altona*, page 71.
	Long. $-\,0^h\,39^m\,46^s\cdot5$	*Bessel's Tab. Reg.* page 2.
GREENWICH - - -	Lat. $+51^\circ\,28'\,38''\cdot2$	*Greenwich Observations*, 1843, page lvii.
	Long. $0^h\,0^m\,0^s$	
HAMBURGH - - - -	Lat. $+53^\circ\,33'\,5''\cdot0$	*Ast. Nach.* vol. vii. page 379.
	Long. $-\,0^h\,39^m\,54^s\cdot1$	*Berliner Astron. Jahrbuch*, 1852, page 289.
HARTWELL - - - -	(Dr. Lee.)	
	Lat. $+51^\circ\,48'\,36''$	Communicated by Dr. Lee.
	Long. $+\,0^h\,3^m\,24^s\cdot33$	
KENSINGTON - - -	(Sir James South.)	
	Lat. $+51^\circ\,30'\,12''\cdot7$	*Mem. Ast. Soc.* vol. v. page 370.
	Long. $+\,0^h\,0^m\,46^s\cdot78$	
KÖNIGSBERG - - -	Lat. $+54^\circ\,42'\,50''$	*Introduction to Bessel's Astron. Observations for* 1821.
	Long. $-\,1^h\,22^m\,0^s\cdot5$	*Bessel's Tab. Reg.* page 2.
KREMSMUNSTER - -	Lat. $+48^\circ\,3'\,24''$	*Ast. Nach.* vol. xi. page 367.
	Long. $-\,0^h\,56^m\,32^s\cdot3$	*Ast. Nach.* vol. iii. page 121.
LEIPSIC - - - - -	Lat. $+51^\circ\,20'\,20''\cdot1$	*Berliner Astron. Jahrbuch*, 1852, page 289.
	Long. $-\,0^h\,49^m\,28^s\cdot5$	
LEYDEN - - - - -	Lat. $+52^\circ\,9'\,28''\cdot2$	*Ast. Nach.* vol. xvii. page 100.
	Long. $-\,0^h\,17^m\,57^s\cdot5$	
LIVERPOOL - - - -	Lat. $+53^\circ\,24'\,47''\cdot8$	Communicated by J. Hartnup, Esq.
	Long. $+\,0^h\,12^m\,0^s\cdot11$	——————— G. B. Airy, Esq.

LATITUDES AND LONGITUDES OF THE PRINCIPAL OBSERVATORIES.

MADRAS	Lat. + 13° 4′ 9″·2 Long. — 5h 21m 3s·77	*Taylor's Result of Ast. Obs. at the Observatory*, vol. i. 1831, pages 94 & 95. (Madras, 1832.)
MAKERSTOUN	(Sir T. M. Brisbane.) Lat. + 55° 34′ 45″ Long. + 0h 10m 4s·0	*Ast. Nach.* vol. x. page 214.
MANHEIM	Lat. + 49° 29′ 14″	*Zach's Correspondance Astronomique*, vol. i. page 193.
	Long. — 0h 33m 51s·4	*Ast. Nach.* vol. ii. page 398.
MARKREE	(E. J. Cooper, Esq.) Lat. + 54° 10′ 36″ Long. + 0h 33m 48s·4	Communicated by E. J. Cooper, Esq.
MARSEILLES	Lat. + 43° 17′ 50″·1	*Zach's Attraction des Montagnes*, vol. ii. page 591.
	Long. — 0h 21m 29s·0	*Ast. Nach.* vol. iv. page 36.
MILAN	(Brera.) Lat. + 45° 28′ 1″	*Zach's Correspondance Astronomique*, vol. v. page 300.
	Long. — 0h 36m 47s·2	*Ast. Nach.* vol. ix. page 312.
MODENA	Lat. + 44° 38′ 53″ Long. — 0h 43m 43s·2	*Effem. Astron. di Milano* for 1829, pages 94 and 60.
MOSCOW	Lat. + 55° 45′ 19″·8 Long. — 2h 30m 17s·0	*Ast. Nach.* vol. xxvii. page 215.
MUNICH	(Bogenhausen.) Lat. + 48° 8′ 45″	*Ast. Nach.* vol. i. page 221.
	Long. — 0h 46m 26s·5	*Ast. Nach.* vol. viii. page 148.
NAPLES	(Capo di Monte.) Lat. + 40° 51′ 46″·6	*Ast. Nach.* vol. v. page 294.
	Long. — 0h 57m 0s·3	Communicated by M. Cacciatore to Captain B. Hall, R.N.
NICOLÆFF	Lat. + 46° 58′ 20″·6	*Ast. Nach.* vol. vii. page 261.
	Long. — 2h 7m 55s·1	*Ast. Nach.* vol. vii. page 306.
OXFORD	Lat. + 51° 45′ 36″·0 Long. + 0h 5m 2s·6	Communicated by M. J. Johnson, Esq.
PADUA	Lat. + 45° 24′ 2″	*Ast. Nach.* vol. v. page 411.
	Long. — 0h 47m 29s·2	*Ast. Nach.* vol. iv. page 347.

LATITUDES AND LONGITUDES OF THE PRINCIPAL OBSERVATORIES.

PALERMO	Lat. $+38°\ 6'\ 44''$	*Cacciatore*, in Books 7 and 8 of *Palermo Observations.*
	Long. $-\ 0^h\ 53^m\ 25^s{\cdot}6$	Communicated by M. Cacciatore to Captain B. Hall, R.N.
PARAMATTA	Lat. $-33°\ 48'\ 49''{\cdot}8$	*Phil. Trans.* for 1829. Part iii. pages 16 and 29.
	Long. $-\ 10^h\ 4^m\ 6^s{\cdot}25$	
PARIS	Lat. $+48°\ 50'\ 13''$	*Conn. des Temps* for 1835, page 356.
	Long. $-\ 0^h\ 9^m\ 21^s{\cdot}5$	*Phil. Trans.* for 1827. (*Henderson on the Longitudes of Greenwich and Paris.*)
PETERSBURGH	Lat. $+59°\ 56'\ 31''$	*Conn. des Temps* for 1836, page 340.
	Long. $-\ 2^h\ 1^m\ 15^s{\cdot}8$	*Ast. Nach.* vol. viii. page 360.
PORTSMOUTH	Lat. $+50°\ 48'\ 3''$	*Requisite Tables*, 3rd edit. (from Trig. Survey.)
	Long. $+\ 0^h\ 4^m\ 23^s{\cdot}9$	
PRAGUE	Lat. $+50°\ 5'\ 18''{\cdot}5$	*Ast. Nach.* vol. viii. page 198.
	Long. $-\ 0^h\ 57^m\ 41^s{\cdot}9$	*Ast. Nach.* vol. iii. page 264.
PULKOWA	Lat. $+59°\ 46'\ 18''{\cdot}6$	*Berliner Astronomisches Jahrbuch, für* 1848.
	Long. $-\ 2^h\ 1^m\ 18^s{\cdot}5$	
REGENT'S PARK	(George Bishop, Esq.)	
	Lat. $+51°\ 31'\ 29''{\cdot}9$	Communicated by George Bishop, Esq.
	Long. $+\ 0^h\ 0^m\ 37^s{\cdot}1$	
ROME	(Roman College.)	*Conn. des Temps* for 1822, page 312.
	Lat. $+41°\ 53'\ 52''$	
	Long. $-\ 0^h\ 49^m\ 54^s{\cdot}7$	*Ast. Nach.* vol. viii. page 88.
SENFTENBERG	Lat. $+50°\ 5'\ 10''$	*Ast. Nach.* vol. xxxi. page 173.
	Long. $-\ 1^h\ 5^m\ 50^s{\cdot}5$	
ST. FERNANDO, near CADIZ	Lat. $+36°\ 27'\ 45''$ or $42''$	*Zach's Correspondance Astronomique*, vol. xiv. pages 240 to 243.
	Long. $+\ 0^h\ 24^m\ 49^s{\cdot}1$	*Ast. Nach.* vol. ix. page 358.
ST. HELENA	Lat. $-15°\ 55'\ 26''$	Communicated by M. J. Johnson, Esq.
	Long. $+\ 0^h\ 22^m\ 50^s$	
SPEYER	Lat. $+49°\ 18'\ 55''{\cdot}2$	*Schwerd's Observations.* Part i. page xx.
	Long. $-\ 0^h\ 33^m\ 46^s{\cdot}5$	*Ast. Nach.* vol. iii. page 46.
STARFIELD	(W. Lassell, Esq.)	
	Lat. $+53°\ 25'\ 3''{\cdot}5$	Communicated by W. Lassell, Esq.
	Long. $+\ 0^h\ 11^m\ 47^s{\cdot}34$	

LATITUDES AND LONGITUDES OF THE PRINCIPAL OBSERVATORIES.

STOCKHOLM - - - -	Lat. + 59° 20′ 31″·0	*Conn. des Temps*, 1840, page 344.
	Long. — 1ʰ 12ᵐ 14ˢ·8	*Ast. Nach.* vol. xi. page 408.
STRASBURGH - - - -	Lat. + 48° 34′ 40″	*Comptes Rendus Hebdomadaires des Séances de l'Académie des Sciences.* 2nd Semestre. 1836, page 520.
	Long. — 0ʰ 31ᵐ 0ˢ·8	
TURIN - - - - - -	(New Observatory.)	
	Lat. + 45° 4′ 6″	Communicated by M. Plana to Captain B. Hall, R.N.
	Long. — 0ʰ 30ᵐ 48ˢ·4	
UPSALA - - - - - -	Lat. + 59° 51′ 50″·0	*Conn. des Temps*, 1840, page 344.
	Long. — 1ʰ 10ᵐ 34ˢ·8	*Ast. Nach.* vol. xi. page 409.
VENICE - - - - - -	Lat. + 45° 25′ 49″·5	*Berliner Astron. Jahrbuch*, 1852, page 290.
	Long. — 0ʰ 49ᵐ 25ˢ·4	
VERONA - - - - - -	(Lyceum.)	
	Lat. + 45° 26′	(Approximate.)
	Long. — 0ʰ 44ᵐ 0ˢ·1	*Effem. Astron. di Milano for* 1829, page 60.
VIENNA - - - - - -	Lat. + 48° 12′ 35″	*Littrow's Astron. Observations.* Part viii. page 124.
	Long. — 1ʰ 5ᵐ 31ˢ·9	*Ast. Nach.* vol. iii. page 64.
VIVIERS - - - - - -	Lat. + 44° 29′ 11″	*Zach's Correspondance Astronomique*, vol. ii. page 138.
	Long. — 0ʰ 18ᵐ 44ˢ·8	*Ast. Nach.* vol. v. page 252.
WARSAW - - - - - -	Lat. + 52° 13′ 5″·0	*Additions to Conn. des Temps*, 1846, pages 30, 31.
	Long. — 1ʰ 24ᵐ 8ˢ·5	
WASHINGTON - - - -	Lat. + 38° 53′ 32″·8	*Ast. Observations made at the Naval Observatory, Washington*, p. viii. (Washington, 1846.)
	Long. + 5ʰ 8ᵐ 0ˢ·0	Communicated by Lieut. Gilliss, U.S.N.
WASHINGTON - - - -	(National Observatory.)	
	Lat. + 38° 53′ 38″·6	*Roy. Ast. Soc. Monthly Notices*, vol. x. page 180.
	Long. + 5ʰ 8ᵐ 12ˢ·0	
WATERINGBURY - - -	(Rev. W. R. Dawes.)	
	Lat. + 51° 15′ 12″	Communicated by the Rev. W. R. Dawes.
	Long. — 0ʰ 1ᵐ 39ˢ·8	
WILNA - - - - - -	Lat. + 54° 41′ 0″	*Ast. Nach.* vol. iv. page 562.
	Long. — 1ʰ 41ᵐ 11ˢ·9	*Ast. Nach.* vol. viii. page 96.
WROTTESLEY HALL - -	(Lord Wrottesley.)	
	Lat. + 52° 37′ 2″·3	Communicated by Lord Wrottesley.
	Long. + 0ʰ 8ᵐ 53ˢ·57	

EXPLANATION OF THE ARTICLES

CONTAINED IN

THE NAUTICAL ALMANAC AND ASTRONOMICAL EPHEMERIS

FOR THE YEAR 1855.

ALL the articles of the Ephemeris have been computed for Greenwich MEAN solar time; and where they are given for apparent solar or sidereal time, it has been chiefly for the convenience of astronomers. A *day* is the interval of time between the departure of any meridian from a heavenly body and its succeeding return to it, and derives its name from the body with which the motion of the meridian is compared. The interval between the departure and return of a meridian to the Sun is called a *solar* day; in the case of the Moon, the interval is called a *lunar* day; and in that of a Star, a *sidereal* day. The revolution of the Earth on its axis is always performed in the same time; and if the heavenly bodies preserved the same positions with respect to each other, the intervals between the departure and return of a meridian to each would be the same, and all days, consequently, of equal length. The Sun, (or more strictly, the Earth in its orbit,) the Moon, and the Planets are, however, in continual motion; and with velocities not only different from each other, but varying in each particular body: the length of a day, as determined by any of these bodies, is therefore a variable quantity.

Astronomers, with a view of obtaining a convenient and uniform measure of time, have recourse to a *mean solar day*, the length of which is equal to the mean or average of all the apparent solar days in a year. An imaginary Sun, called the *mean* Sun, is conceived to move uniformly in the Equator with the real Sun's *mean* motion in Right Ascension, and the interval between the departure of any meridian from the *mean* Sun and its succeeding return to it is the duration of the mean solar day. Clocks and chronometers are adjusted to mean solar time; so that a complete revolution (through 24 hours) of the hour hand of one of these machines should be performed in exactly the same interval as the revolution of the Earth on its axis with respect to the mean Sun. If the mean Sun could be observed on the meridian at the instant that the clock or chronometer indicated $0^h\ 0^m\ 0^s$, it would again be observed there when the hour hand returned to the same position. As the time deduced from observation of the *true* Sun is called *true* or *apparent* time, so the time deduced from the *mean* Sun, or indicated by the machines which represent its motion, is denominated *mean* time.

We cannot *immediately* obtain mean time from observation; but, from an observation of the true Sun, with the aid of the equation of time, which is the angular distance in time between the mean and the true Sun, we may readily deduce it.

[illegible] Sun to be observed on the meridian of Greenwich, Jan. 1, 1855;

[illegible]arent noon at that meridian; the equation of time at this instant

[illegible]he precept at the head of the column, it is "*to be added to*

apparent time"; hence it appears that the corresponding mean time is $0^h\ 3^m\ 43^s{\cdot}63$, or that the mean Sun had passed the meridian previously to the true Sun, and that at the instant of observation the mean time clock or chronometer ought to indicate this time.

A mere inspection of the columns of the Ephemeris is, of itself, sufficient to show that the quantities are continually varying, and that some reduction is necessary where data are to be obtained for any time differing from that for which the quantities are registered. Take, for instance, the Sun's Right Ascension on Page II. of the month of January; on January 1, it is $18^h\ 46^m\ 0^s{\cdot}81$; on January 2, it is $18^h\ 50^m\ 25^s{\cdot}58$; in the course of 24 mean hours is has therefore increased by $4^m\ 24^s{\cdot}77$. If, then, the Right Ascension were required for any time between the Mean Noons of January 1 and 2, as at 6^h from Mean Noon of January 1, it would be necessary to increase the Right Ascension on January 1, by the proportional part of the daily increase due for the 6^h, viz. by one-fourth part, or $1^m\ 6^s{\cdot}19$. This would in all cases be required, even under the meridian of Greenwich, for which the quantities have been specially computed. Let a person be now supposed to be under a meridian 15° West of Greenwich. The positions of the heavenly bodies, as referred to the centre of the Earth, are independent of meridians, and are the same for all places at the same absolute instant; but the relative times at Greenwich and the assumed meridian would be different. If it were 1^h from mean noon at the one place, it could not be 1^h from mean noon at the other; for when we speak of time, we mean, as regards a visible phenomenon, the distance of the Sun *westward* from a given meridian, and at the same absolute moment of time the Sun *cannot* be at the same distance (*reckoning westward*) from two meridians which are 15° distant from each other. Before we can make use of the Ephemeris, it is therefore necessary to ascertain, in every instance, the distance of the Sun (*in time*) from the meridian of Greenwich, or what is commonly called the corresponding Greenwich time; and this is evidently equal to the given time under the assumed meridian, *increased* or *diminished* by the difference (*in time*) of the two meridians, according as the assumed meridian is to the *Westward* or *Eastward* of Greenwich. In a mean Solar day or 24 mean Solar hours, the Earth, by its rotation from West to East, has caused every meridian in succession from East to West to pass the mean Sun; and since the motion is uniform, all the meridians distant from each other 15° will have passed the mean Sun, at intervals of one mean hour; the meridian to the Eastward passing first, or being, as compared with the Sun, always one mean hour in advance of the Westerly meridian. When it is 6^h from mean noon at a place 15° West of Greenwich, it is therefore 7^h from mean noon at Greenwich; and it is for this Greenwich time that we must deduce the quantities required from the Ephemeris.

If a chronometer adjusted to Greenwich mean time be at hand, the Greenwich time may be immediately obtained by applying a correction, deduced from the daily rate and interval elapsed, and this will be preferable in all cases for obtaining the requisite data from the Ephemeris.

The day adopted in this Ephemeris is supposed to begin at mean noon, or at the instant when a clock or chronometer shows $0^h\ 0^m\ 0^s$, Greenwich mean time, and is continued through the 24 hours, to the following mean noon, when another day begins. It may therefore be called the *Mean Astronomical Day*, although, in practice, astronomers begin the day at the moment the true Sun's centre is on their meridian.

In the civil, or common, method of reckoning, the day is supposed to commence at the *preceding* midnight, and to be counted only to 12 hours or noon, when the 12 hours are reckoned over again to the next midnight. The civil reckoning is therefore always

12^h in advance of the astronomical reckoning: and the civil time corresponding to any given astronomical time is hence readily found by *adding* 12^h to the latter: thus, if to Jan. 1^d 7^h 49^m, astronomical time, be added 12^h, the sum will be Jan. 1^d 19^h 49^m, or Jan. 1^d 7^h 49^m P.M. civil time. Again, to Jan. 1^d 15^h 35^m, astronomical time, add 12^h; the sum will be Jan. 2^d 3^h 35^m A.M civil time. It thus appears that, from noon to midnight, the day of the month and the hour of the day are the same in both methods; but from midnight to noon they differ; for at midnight, when a new civil day commences, the astronomical day wants 12^h of its completion.

The conversion of civil into astronomical time, is, on the contrary, performed by *diminishing* the former by 12^h. Thus, January 2^d 3^h 35^m A.M. civil time, diminished by 12^h, leaves January 1^d 15^h 35^m for the corresponding astronomical time.

To each month there are devoted twenty pages, distinguished by the Roman numerals I. to XX.

For convenience of interpolation, the quantities that follow next in order of succession have been added at the bottom of each page. Thus the quantities opposite to February 1 will be found inserted also opposite to January 32, the number of the days in each month having been intentionally increased for such purpose.

Page I. of each Month.

The contents of this page are adapted to *Apparent Noon*, or the instant when the Sun's centre is on the meridian of Greenwich. The *Sun's Right Ascension*, here given, is *affected with Aberration*, and reckoned from the true Equinox; it is therefore the Sidereal Time at Apparent Noon, or the time which ought to be shown by a Sidereal Clock, at that instant. The *Sun's Apparent Declination* is the angular distance of the Sun from the Equator, measured on the meridian.

The columns entitled "Diff. for 1 hour" are intended to facilitate the reduction of the quantities from Apparent Noon to any other time. The values of these quantities for any proposed *Mean* time will, however, be more accurately ascertained by means of the numbers on page II. from which, indeed, they have been derived.

The *Sidereal Time of the Sun's Semidiameter passing the Meridian* is useful for reducing a transit observation of either limb of the Sun, when one only has been observed, to the transit of the centre.

The *Equation of Time* is the difference between Apparent and Mean Time, and therefore serves for the conversion of either time into the other. The numbers here given, show, for Greenwich Apparent Noon, the distance of the mean Sun from the meridian, or the portion of time to be *added to* or *subtracted from*, (according to the precept at the head of the column,) Greenwich Apparent Noon to obtain the corresponding Mean Time at the same meridian, or the time which ought to be shown by the Mean Time Clock. It differs from the Equation of Time on page II., because the equation itself varies in the interval between Apparent and Mean Noon.

Where time is deduced from observations of the Sun, the *immediate* result is *apparent* time; to convert it into mean time, the equation of time is necessary, and it is to be applied to apparent time, according to the precept at the head of the column.

Thus, suppose the apparent time deduced from an observation of the Sun on January 16, 1855, in longitude 45° or 3^h East of Greenwich, to be 6^h, and it were required to convert it into mean time: Subtracting the difference of longitude 3^h from the apparent time [illegible]ce, we have 3^h for the corresponding apparent time at

Greenwich. The difference of the equation for 1 hour is $0^s \cdot 849$, which, multiplied by 3, gives $2^s \cdot 547$ for the variation in 3 hours, and this being added (because the equation is increasing) to $9^m\ 58^s \cdot 55$, the equation of time at apparent noon, the result is $10^m\ 1^s \cdot 10$, to be added (according to the precept at the head of the column) to the given apparent time 6^h, whence we obtain $6^h\ 10^m\ 1^s \cdot 10$ for the mean time required.

At page I. of the month of April, we observe, at the head of the column $\frac{\textit{added to}}{\textit{subt. from}}$ which signifies that a change of precept occurs in the course of the month, and between the equations opposite to the 15th and 16th days of the month, a black line, indicating that the change occurs between the Apparent Noons of those days. The upper precept applies to all the quantities above the black line; and the lower precept to all the quantities below it: that is, in the instance referred to, the Equation of Time is to be *added to* Apparent Time from the 1st of April to the instant at which the equation becomes $0^m\ 0^s$, which happens between the noons of the 15th and 16th days of the month; but after that instant the equation is to be *subtracted* from Apparent to obtain Mean Time.

Page II. of each Month.

The *Sun's Apparent Right Ascension* and *Declination* at mean noon have been deduced from its *Apparent* longitude and latitude given at page III., and the *apparent* obliquity of the ecliptic at page 242. They denote the *apparent* position of the true Sun with reference to the equator, and the true equinox, at the instant the Greenwich mean time clock, or chronometer, indicates $0^h\ 0^m\ 0^s$, or when the hour angle of the true Sun is equal to the equation of time.

To find the Right Ascension and Declination for any other mean time and place, as at $9^h\ 20^m$ A.M. March 2, 1855, in longitude 98°, or $6^h\ 32^m$, West of Greenwich. The astronomical time, corresponding to $9^h\ 20^m$ A.M. March 2, is $21^h\ 20^m$ from the noon of March 1, or March $1^d\ 21^h\ 20^m$, agreeably to what has been said before. The longitude, being West of Greenwich, must be added to March $1^d\ 21^h\ 20^m$, and the result, March $2^d\ 3^h\ 52^m$, is the corresponding Greenwich mean time, for which the Right Ascension and Declination are to be found. The difference between the Right Ascensions on March 2, and March 3, is $3^m\ 43^s \cdot 94$, that is, in the 24 mean hours succeeding the Mean Noon of March 2, the Right Ascension has increased by this quantity; it will, therefore, have received a proportional part of the increase in $3^h\ 52^m$, and the amount is readily obtained by this proportion $24^h : 3^m\ 43^s \cdot 94 :: 3^h\ 52^m : 36^s \cdot 08$; which, being *added* to $22^h\ 51^m\ 17^s \cdot 84$, the Right Ascension at Mean Noon of March 2, gives $22^h\ 51^m\ 53^s \cdot 92$, for the Right Ascension at the time proposed.

In a similar manner the Declinations indicate a decrease of $22'\ 54'' \cdot 8$ in the 24 hours; therefore $24^h : 22'\ 54'' \cdot 8 :: 3^h\ 52^m : 3'\ 41'' \cdot 4$, the proportional part of the decrease for $3^h\ 52^m$, which, *subtracted* from S. 7° 18′ 10″·5 leaves S. 7° 14′ 29″·1 for the Declination required.

The *Semidiameter of the Sun.* The numbers in this column express the angle at the centre of the earth subtended by the Sun's Semidiameter, and are required for reducing observations of the limb to the centre, as in the instance of measuring the altitude of the Sun's upper or lower limb, or the distance of the Moon from the Sun.

Equation of Time. The numbers in this column are the values of the equa- at the instant of Mean Noon, and therefore serve more particularly to convert into *Apparent* Time; for which purpose we have only to apply the equation acc to the precept at the head of the column. Thus, if from mean noon of Apri

12^h, be subtracted the equation $4^m\ 3^s{\cdot}88$; the difference $11^h\ 55^m\ 56^s{\cdot}12$ is the corresponding apparent time. To find the equation of time at 6^h P.M. mean time on April 15, 1855, in longitude 90°, or $6^h\ 0^m$, West of Greenwich. Add the difference of longitude to the given time, because it is West, and the corresponding astronomical mean time at Greenwich is April $15^d\ 12^h\ 0^m$. The variation in 24 hours is $14^s{\cdot}77$, that is, the *sum* of the equations belonging to the noons of the 15th and 16th, because the equation has decreased to 0 and then increased in the interval, therefore

$$24^h : 14^s{\cdot}77 :: 12^h\ 0^m : 7^s{\cdot}39,$$

which, being greater than $0^m\ 6^s{\cdot}76$, the equation on the 15th, which was decreasing, shows that in the $12^h\ 0^m$ the equation has passed through its state of decrease to zero, or 0, and is now increasing. The difference $0^s{\cdot}63$ is the equation of time at the time proposed, and is to be added to mean time, because it has passed the zero.

Sidereal Time at Mean Noon is the angular distance of the First point of Aries, or the true Vernal Equinox, from the meridian, at the instant of Mean Noon: it is therefore the Right Ascension of the Mean Sun, or the time which ought to be shown by a Sidereal Clock at Greenwich, when the Mean Time Clock indicates $0^h\ 0^m\ 0^s$.

A Sidereal Clock represents the rotation of the Earth on its axis, as referred to the Stars, its hour hand performing a complete revolution through the 24 hours in the interval between the departure of any meridian from a Star and its next return to it. At the moment that the Vernal Equinox, or a Star whose Right Ascension is $0^h\ 0^m\ 0^s$, is on the meridian of Greenwich, the Sidereal Clock ought to show $0^h\ 0^m\ 0^s$, and at the succeeding return of the Star, or the Equinox, to the same meridian, the Clock ought to indicate the same time.

The sidereal time here given is that in common use among astronomers, and expresses the actual hour-angle from the meridian, westward, of the true equinoctial point at the moment of observation. It is therefore affected by the equation of the equinoxes; and is not, strictly speaking, a *mean* or uniformly increasing quantity. It ought, therefore, to be termed *apparent sidereal time* in the same manner as apparent solar time reckons from the actual arrival of the sun's centre on the meridian; and in like manner, as mean solar time is reckoned from the arrival of an imaginary sun, moving uniformly with its mean velocity, so *mean sidereal* time (whose expression would be simply $\frac{\odot\text{'s mean longitude}}{15}$) would be reckoned from the transit of, not the *true*, but the *mean* equinoctial point. The smallness of the fluctuations to which a clock, regulated to *apparent* sidereal time compared with one regulated to *mean* sidereal time, is subject, being at the utmost only $2^s{\cdot}3$ in a period of nineteen years, has prevented the practical inconvenience of this from being felt: no clock being sufficiently perfect to go during so long a period without frequent re-adjusting; and as the corrections applied by astronomers to the observed right ascensions of all objects are adapted to this supposed irregularity in the rate of the clock, the mean right ascensions thence deduced come out correct. It has, therefore, not been thought necessary, in this instance, to depart from received usage, however theoretically objectionable such a mode of counting time may appear, since a change in this respect would involve t[illegible]ssity of a corresponding change in all tables of nutation.

Th[illegible]t Mean Noon is useful in all cases where mean solar time is to be d[illegible]tions of the heavenly bodies. It serves to facilitate the red[illegible]n solar time, and *vice versâ*, by the help of the tables cor[illegible]e called a Table of Acceleration of Sidereal on Mean

Solar Time, and the corresponding Table of Retardation of Mean on Sidereal Time, according to the following rule:—Convert the interval from the mean noon immediately preceding, from the denomination given, to that required; and if mean time be required, the result will at once be that which the clock should show; but if sidereal time be that sought, the result must be added to the sidereal time at the preceding mean noon.

Example:—To convert $21^h\ 9^m\ 24^s{\cdot}04$ sidereal time, Jan 2, 1855, into mean solar time, for the meridian of Greenwich.

	h	m	s
Sidereal time given	21	9	24·04
Sidereal time *at* mean noon, January 2	18	46	13·81
Interval in sidereal time *from* mean noon	2	23	10·23
Retardation of mean on sidereal time for the interval			— 23·45
Mean solar time required	2	22	46·78

which is the interval elapsed since mean noon, expressed in mean time; and therefore the time which ought to be shown by a mean time clock.

Vice versâ, to convert $2^h\ 22^m\ 46^s{\cdot}78$ mean solar time, January 2, 1855, into sidereal time for the same meridian.

	h	m	s
Mean interval from mean noon, January 2	2	22	46·78
Acceleration of sidereal on mean time for the interval			+ 23·45
Sidereal interval *from* mean noon	2	23	10·23
Sidereal time *at* mean noon, January 2	18	46	13·81
Sidereal time required	21	9	24·04

which ought to be the time shown by the sidereal clock at the instant in question.

If the place of observation be not on the meridian of Greenwich, the sidereal time must be corrected by the *addition* of $9^s{\cdot}8565$ for each hour (and proportional parts for the minutes and seconds) of longitude, if the place be to the west of Greenwich; but by its *subtraction*, if to the east. Thus in $9^h\ 10^m\ 6^s$ west longitude, the sidereal time at mean noon, January 2, instead of being, as in the foregoing Example, $18^h\ 46^m\ 13^s{\cdot}81$, must be corrected by adding $1^m\ 30^s{\cdot}37$, thus giving $18^h\ 47^m\ 44^s{\cdot}18$ for the time to be used, instead of that set down in the column.

The conversion of mean solar to sidereal time, and *vice versâ*, may, however, be performed, and with perhaps less liability to error, by means of this and of the column entitled *Mean Time of Transit of the First point of Aries*, at page XX. of each month, using the Tables of Time Equivalents, inserted at pages 586 to 589.

To convert mean solar into sidereal time: To the sidereal time at the *preceding* mean noon add the sidereal interval corresponding to the given mean time; the sum will be the sidereal time required. (See Example at page 587.)

To convert sidereal into mean solar time: To the mean time at the *preceding* sidereal noon, add the mean interval corresponding to the given sidereal time; the sum will be the mean solar time required. (See Example at page 589.)

In this mode of reduction there is not, as in the former, by means of the Tables of Acceleration and Retardation, any distinction of cases, all the quantities being additive.

The Tables of Time Equivalents differ from the Tables of Acceleration and Retardation, in containing the *values* of intervals of each species of time, expressed in

terms of the other, instead of the *corrections*, respecting the proper application of which, a difficulty is sometimes felt by unpractised computers.

Sidereal time at mean noon is also used in finding the mean time of transit of a heavenly body.

Page III. of each Month.

The *Sun's Longitude*, here given, *is affected with aberration*, and reckoned from the *true* equinox: it is therefore the apparent longitude of the Sun at the instant of mean noon; or it is (if ρ denote the Radius Vector) the *true* Longitude of the Sun at the time $0^h - 497^s{\cdot}235\ \rho$, because aberration causes the Sun to appear behind its true place in the Ecliptic.

The *Sun's Latitude* is the angular distance of the Sun's centre from the plane of the Ecliptic, measured on a circle perpendicular to that plane.

The *Logarithm of the Radius Vector of the Earth* is the logarithm of the distance between the centre of the Earth and the *apparent* place of the centre of the Sun at mean noon, the mean distance, or the semi-axis major of the orbit, being considered unity.

These quantities are derived *immediately* from the Solar tables, and enter into, indeed are the foundation of, nearly all the subsequent operations in the Ephemeris. Whenever the *true* longitude of the Earth is required, as in calculating the Geocentric position of a Planet or Comet from its Heliocentric position, it is necessary to reduce the *apparent* longitude of the Sun to the *true*, by correcting it for aberration. The Sun's aberration for every tenth day is given at page 242, and may thence be readily obtained for any other day of the year. (See *Sun's Aberration*, page 613.) In strictness, the *Logarithm of the Radius Vector* should also be corrected for aberration, but this is generally neglected, the correction being too small to affect the accuracy of the results in practice.

The Sun's longitude, entering into the expressions for aberration and Solar nutation, is required for the reduction of the Stars' places.

The *Moon's Semidiameter* is the angle under which her Semidiameter would appear if viewed from the centre of the Earth; and her *Horizontal Parallax* is the *greatest* angle under which the Earth's Equatorial Semidiameter would appear if seen from the centre of the Moon. The former is requisite to obtain the position of the centre from an observation of the Moon's *limb*, as in all cases of altitudes or lunar distances. The latter, for computing the horizontal parallax of the Moon at any given latitude on the Earth, *considered as a Spheroid;* also for finding the parallax in altitude, Right Ascension, &c., for the purpose of reducing an observation of the Moon made on the surface of the Earth, to what it would be if made at the centre.

In reducing observations of the Moon made at sea, the horizontal *equatorial* parallax is generally used for finding the parallax in altitude, without regarding the previous reduction to the Spheroid; but in calculations requiring considerable precision, as in lunar occultations and solar eclipses, this reduction cannot be dispensed with.

Example. To find the Moon's Semidiameter and Horizontal Parallax at 6^h A.M. February 13, 1855, at a place 15°, or 1^h to the East of Greenwich. The civil time at the place expressed in mean astronomical time, is February $12^d\ 18^h$, from which subtracting 1^h, because the place is to the East of Greenwich, we have February $12^d\ 17^h$ for the corresponding time at Greenwich, or 5^h after midnight. Proceeding from the semidiameter given for midnight of the 12th, we must compute the pro-

portional part of the variation in 12 hours due to the time elapsed since midnight, viz. 5^h; and for ordinary purposes at sea, it will suffice simply to take this proportional part for the correction of the registered value preceding the given time; thus the semidiameter for midnight, or 12^h, of the 12th, is 16′ 22″·0, and for the 13th at noon, or 24^h, it is 16′ 28″·2; the difference 6″·2 is the variation in 12 hours. Therefore,

$$12^h : 6''\cdot2 :: 5^h : 2''\cdot6,$$

which *added* (because the quantities are increasing) to 16′ 22″·0, gives 16′ 24″·6 for the Moon's Semidiameter at the time proposed. Similarly the Horizontal Parallax at midnight of the 12th is 59′ 56″·7; and at noon of the 13th it is 60′ 19″·4; the difference 22″·7 is the variation in the 12 hours which include the given time; therefore, $12^h : 22''\cdot7 :: 5^h : 9''\cdot5$, which *added* (because the quantities are increasing) to 59′ 56″·7 gives 60′ 6″·2 for the Horizontal Parallax required. If greater accuracy be desired, a further correction must be applied to the values just obtained, on account of second differences, to compensate the error produced by supposing the first differences uniform. But the *greatest* error in the semidiameter which can arise by this supposition in the present instance is not one-tenth of a second; for, select four semidiameters from the Ephemeris, two preceding, and two following the given time, and take the first and second differences thus:—

	h	′	″	″	″
February 12,	0	16	15·3		
				+ 6·7	
	12	16	22·0		− 0·5
				+ 6·2	
13,	0	16	28·2		− 0·7
				+ 5·5	
	12	16	33·7		

The mean of the second differences is 0″·6 and ½ of this, which is the *greatest* effect, is only 0″·075.

A similar operation performed on the Parallaxes will show the error that would arise on the supposition of uniform or equal first differences, to be three-tenths of a second.

Page IV. of each Month.

The *Moon's Longitude and Latitude* at Mean Noon and Midnight indicate the position of the Moon at these respective times, referred to the Ecliptic and the true Equinox, as it would be seen from the centre of the earth. They are the results deduced immediately from the Lunar Tables, and are the foundation of all subsequent calculations in which the Moon is concerned. These quantities are now of little use to the seaman, as the position of the Moon, with respect to the Equator, is given for every hour in the succeeding pages; but the Moon's Longitude is involved in the formulæ for nutation, and is therefore necessary for its determination. In finding the Moon's Longitude and Latitude for any other times than those of Mean Noon and Midnight, it is necessary to apply the equation of second, and sometimes even of third and fourth differences, on account of the irregular variation of her motion.

The *Moon's Age* at Mean Noon is the Mean Time elapsed since the Moon's ecliptic conjunction with the Sun, or since the Sun and Moon had the same Longitude. The numbers in this column represent her age at Greenwich, and are expressed in days, and decimal parts of a day.

The *Moon's Meridian Passage.*—This column contains the Greenwich Mean Time to the nearest tenth of a minute, at which the Moon's centre is on the *upper* Meridian

of Greenwich, and is useful to indicate when the Latitude may be obtained from an observed meridian altitude of the Moon; also, in conjunction with a Table of Semi-diurnal Arcs, to determine approximately the times of the rising and setting of the Moon: it is likewise useful in finding the time of High Water.

When the symbol (♂) denoting conjunction occurs, as on February 15, we are to understand that the Moon does *not* pass the *upper* meridian on that day at Greenwich. This is the case once in every lunation, and arises from the circumstance of the Lunar day being greater than the Mean Solar day, and including it within its limits. In the present instance, the excess is $1^h\ 0^m\cdot 8$, or the lunar day is equal to $25^h\ 0^m\cdot 8$ Mean Solar time; the Moon passes the meridian on the 14th at $23^h\ 5^m\cdot 1$, or $54^m\cdot 9$ *previously* to the noon of the 15th, and does not return to the same meridian until $0^h\ 5^m\cdot 9$ *after* the noon of the 16th. For the same reason there is also one day in every lunation on which the Moon does not transit the *lower* meridian, and this happens about the time of opposition, or when the difference of longitude of the Sun and Moon is 180°. In the list of Moon-culminating Stars, at pages 480 to 522, the days on which only one transit occurs are readily seen. On January 17th (page 481), for instance, it appears that the Moon transits the *lower* meridian only, while on February 1st (page 483), the only transit is that at the *upper* meridian.

To find the Mean Time of Transit under any other Meridian, suppose 45° or 3^h West of Greenwich, on January 15, 1855. The Meridian being to the West of Greenwich, the Transit will take place *after* the Greenwich time of Transit on the 15th; therefore take the difference between the Meridian Passages on the 15th and 16th, which is $1^h\ 6^m\cdot 5$. Then $24^h : 1^h\ 6^m\cdot 5 :: 3^h : 8^m\cdot 3$, which *added* to the Greenwich Mean Time of Transit gives $22^h\ 20^m$ for the Mean Time of Transit at the given Meridian. Had the assumed Meridian been 3^h to the East of Greenwich, the Transit would have taken place *before* the Transit at Greenwich, and the proportional part of the difference between the 14th and 15th, must in this case have been *subtracted*. The times thus deduced are only approximate; but they are sufficiently accurate for the purposes usually required.

Pages V. to XII. of each Month.

The *Moon's Right Ascension and Declination* for every hour of the day, with the *Difference of Declination for* 10 *minutes*. By means of the quantities here given, the Latitude, Time, Azimuth, Moon's rising and setting, &c., may be deduced, with nearly as little labour as is required in the case of the Sun. The numbers represent the position of the Moon, as it would appear from the centre of the Earth, with respect to the Equator and the true Equinox; and they are given for every hour, with the view of rendering any correction for second differences unnecessary, except where extreme precision is required. The Right Ascension for any time is readily obtained by simply adding the proportional part of the hourly variation due to the interval elapsed since the preceding hour. Thus, suppose the Right Ascension of the Moon were required at $8^h\ 45^m$ mean time of January 12, in longitude 60°, or 4^h east of Greenwich. The given time, $8^h\ 45^m$, diminished by 4^h, gives the corresponding Greenwich time $4^h\ 45^m$. The Right Ascension at 4^h is $14^h\ 15^m\ 20^s\cdot 65$, and at 5^h it is $14^h\ 17^m\ 23^s\cdot 86$; the difference $2^m\ 3^s\cdot 21$, is the increase in the interval, or 60^m. Hence, $60^m : 2^m\ 3^s\cdot 21 :: 45^m : 1^m\ 32^s\cdot 41$, which being added to the Right Ascension at 4^h, gives $14^h\ 16^m\ 53^s\cdot 06$ for the Right Ascension at $4^h\ 45^m$ at Greenwich, or at $8^h\ 45^m$ under the proposed meridian. To find the Declination, we make use of the numbers in the column headed "Diff. Dec. for 10 ... column standing

opposite to any hour is $\frac{1}{3}$ of the difference of the Declinations at that and the following hour. We therefore say, $10^m : 135''{\cdot}15 :: 4\ 5^m : 10'\ 8''{\cdot}2$, which being added (because the Declinations are increasing) to S. 12° 14′ 38″·2, the Declination at 4^h, gives S. 12° 24′ 46″·4, for the Declination at the time proposed.

The *Phases of the Moon.* These are given at page XII. to the nearest tenth of a minute. The numbers denote the Greenwich Mean Time, at which the difference of Longitude between the Sun and the Moon is 0°, 90°, 180°, or 270°, being

0° at the New Moon,
90° at the First Quarter,
180° at the Full Moon,
270° at the Last Quarter.

The Moon's *Apogee and Perigee.* The numbers here given indicate, to the nearest hour, the Greenwich Mean Time at which the Moon is respectively at her greatest and least distance from the Earth.

Pages XIII. to XVIII. of each Month.

Lunar Distances.—These pages contain, for every third hour of Greenwich Mean Time, the angular distances between the apparent *centres* of the Moon and certain heavenly bodies, such as they would appear to an observer at the centre of the Earth. When a Lunar Distance has been observed on the surface of the Earth, and reduced to the centre, by clearing it of the effects of parallax and refraction, the numbers in these pages enable us to ascertain the exact Greenwich Mean Time at which the objects would have the same distance. They are arranged, from *west* to *east*, commencing each day with the object which is at the greatest distance *westward* of the Moon, in the precise order in which they appear in the heavens; W. indicating that the object is west, and E. east of the Moon. Thus we have at one view, by a simple reference to the date, all the lunar distances which are available for the determination of the Longitude.

The columns headed "P.L. of diff." contain the Proportional Logarithms of the Differences of the Distances at intervals of three hours, which are used in finding the Greenwich time corresponding to a given distance, according to the following rule, viz: For the given day, seek in the Ephemeris for the *nearest* distance *preceding*, in order of time, the given distance, and take the difference between it and the given distance; from the proportional logarithm of this difference subtract the proportional logarithm standing opposite to the said *nearest* distance in the Ephemeris; the remainder will be the proportional logarithm of a portion of time to be added to the hour answering to the *nearest* distance, to obtain the approximate Greenwich mean time corresponding to the given distance.

If the distance between the Moon and a Star increased or decreased uniformly, the Greenwich times corresponding to a given distance, as found by the above rule, would be strictly correct; but an inspection of the columns of the Proportional Logarithms in the Ephemeris will show that this is not the case; and as the knowledge of the exact Greenwich time is desirable, a correction must be applied to the time so found for the variation of the differences of the distances. This correction may be obtained by means of the Table at page 590 of the present volume, in the following manner:

1. Find the Approximate interval by the preceding rule.

2. Take the difference between the proportional logarithms standing opposite to the distances in the Ephemeris which include the given distance.

3. With the approximate interval and this difference, as arguments, take out the correction from the table.

4. If the Proportional Logarithms are *decreasing*, *add* the correction to the approximate time; but if *increasing*, *subtract* it: the result will be the accurate Greenwich Mean Time.

Example I.—Suppose it were required to find the Greenwich Mean Time, at which the *reduced* distance between the Moon and α Pegasi would be 47° 0′ 58″ on January 24, 1855. It appears, by inspecting the distances, that the time must be between *Midnight* and XV^h: the *nearest* distance *preceding*, in order of time, the given distance is therefore the

	° ′ ″		
Distance at *Midnight*	46 19 58	and P. L. - -	3426
Reduced Distance -	47 0 58		
Difference - -	0 41 0	- - P. L. - -	6425
Approximate Interval	1^h 30^m 14^s	- P. L. - -	2999

The difference between the Proportional Logarithms in the Ephemeris, at *Midnight*, and XV^h, is 24. Opposite to 1^h 30^m 14^s (or the quantity nearest to it, 1^h 30^m), and under 24, in the Table, we have for the correction 8^s, which, *added* to the Approximate Interval, 1^h 30^m 14^s, because the Proportional Logarithms are *decreasing*, gives 1^h 30^m 22^s, for the true interval from *Midnight:* and hence the Greenwich Mean Time is 13^h 30^m 22^s.

We see that, in the preceding Example, the omission of this correction would only produce an error of 2′·0 in the Longitude. Cases may however occur, in which it would be greater.

It will sometimes happen, that the difference of the Proportional Logarithms will exceed 138, the limit of the Table of Correction; in this case the Table may be entered with the Approximate Interval, and *one-half or any fraction* of the difference of the Proportional Logarithms and the corresponding correction *increased in like proportion.*

Example II.—Suppose it were required to find the Greenwich Mean Time, at which the *reduced* distance between the Moon and α Aquilæ would be 43° 33′ 57″ on April 12th, 1855. By inspecting the distances, it appears that the time must be between *Noon* and III^h; therefore take the

	° ′ ″		
Distance at *Noon* -	43 3 26	and P. L. - -	4626
Reduced Distance -	43 33 57		
Difference - - -	0 30 31	- - P. L. - -	7707
Approximate Interval	1^h 28^m 33^s	- P. L. - -	3081

The difference between the Proportional Logarithms in the Ei …on
and III^h, is 162, one-half of which is 81; under this numbe… id
opposite that nearest the Approximate Interval, is 25^s: the … e
50^s to be *added* to the Approximate Interval, because the Pr… s
are *decreasing;* the time at Greenwich is therefore 1^h 29^m …

The omission of the correction in the preceding example would produce an error of 12''·5 in Longitude; it may, however, be considered as an extreme case, and such as will seldom be met with.

The proportional logarithms also serve to point out the Star which is most favourably circumstanced for accurate observation; that Star being to be preferred which has the least Proportional Logarithm opposite to it; for, the greater the velocity of the Moon from or towards a Star, the greater is the reliance to be placed on an observation of the distance; and it is a property of Proportional Logarithms to decrease as their natural numbers increase: a smaller Proportional Logarithm, therefore, indicates a greater velocity of the Moon, or a greater variation of distance in the interval, upon which the value of the observation depends. Thus, on April 22, 1855, between *Noon* and III^{h}, Spica $\eta\beta$ is the most eligible star, because the Proportional Logarithm, 2983, is less than that of any other; and, by inspecting the columns of Proportional Logarithms, it will appear to deserve the preference until XVIII^{h} on the 24th day.

On the 7th day of July, between IX^{h} and *Midnight*, the following is the order of preference, as indicated by the Proportional Logarithms, viz., Jupiter, Saturn, Aldebaran, Fomalhaut, Mars, Sun, α Pegasi, α Aquilæ.

It is by no means to be inferred from these remarks that observations of any of the distances are to be neglected; on the contrary, every registered star should invariably be observed when an opportunity offers. If, however, on a comparison of results, a considerable difference should be discovered, the Proportional Logarithms will indicate the stars which are least liable to be affected by errors of observation, and therefore deserving of a greater degree of confidence as to the accuracy of the results obtained from them.

Page XIX. of each Month.

Configurations of the Satellites of Jupiter.

In addition to the explanation given at the foot of the page, it may be remarked, that when two Satellites are in or near conjunction, instead of the usual symbol (δ), it has been thought better to place one above the other, without regard to their actual latitudes, but merely to distinguish them in their relation of *upper* and *lower*.

The Satellites are in the superior parts of their orbits, or have Jupiter between them and the Earth, when they are moving from West to East, or towards the right-hand of the page; but they are in the inferior parts of their orbits, or between the Earth and Jupiter, when they are moving from East to West, or towards the left-hand: in the former case Eclipses and Occultations occur, and in the latter Transits of the Satellites and their Shadows.

If an inverted telescope be directed towards Jupiter on March 1, 1855, at 17^{h} 30^{m} Mean Time, the Satellites will appear to an observer at Greenwich in the positions as laid down in the Table. The 1st and 2nd Satellites, which are *really* to the left of the Planet, will appear to the right of it; and the 3rd and 4th, which are *really* to the right, will appear to be to the left.

West and *East*, at the head of the page, are inserted to show the positions of the Satellites with respect to Jupiter, as they would appear in a telescope that does *not* invert. Jupiter being always to the South of the zenith of Greenwich, the Satellites which are here laid down on the left of Jupiter would appear to the *West*, and those on the right-hand to the *East* of the planet.

As regards their positions to the east or west, the page viewed directly, exhibits the Satellites in an inverted order; but if the leaf be turned over, and the page viewed from the other side, they will appear in their real positions. The simplest mode of changing the position of a Satellite from apparent to real, and *vice versâ*, is to draw a line from the Satellite through Jupiter's centre, and to place the Satellite upon this line at the same distance from the centre as before, only on the opposite side. If this operation be performed upon the Configurations as laid down in this volume, the Satellites will be reduced to their real positions.

As the Configurations are given for *Mean Astronomical time*, which agrees with *Civil time* only from 0^h to 12^h, or from noon to midnight, when the time exceeds 12^h the excess will indicate the Civil time of the succeeding day of the month.

Thus in February, 1855, the Configurations are given for $18^h\ 45^m$ mean time, but the 18th hour from noon is the same as the 6th hour from the following midnight, when a new Civil day has commenced. The appearances, therefore, relate to $6^h\ 45^m$ A.M. of the day following, according to the common mode of reckoning time; that is, the Configurations at $18^h\ 45^m$ on February the 26th relate to $6^h\ 45^m$ A.M. on February the 27th.

The Configurations enable an observer to distinguish the Satellites from each other, and from Stars in the vicinity of Jupiter.

Page XX. of each Month.

1. *Logarithms of* A, B, C, D, *for correcting the Places of the Fixed Stars.*

In the formulæ which express the relation of the apparent place of a Star to its mean place, and reciprocally, there are certain factors which are independent altogether of the Star's place, and are therefore common to all Stars. These factors depend upon the longitudes of the Sun, Moon, and Moon's ascending Node.

The Logarithms here given are the logarithms of these independent factors conveniently arranged for incorporation with other terms depending upon each particular Star, according to the method recommended by the late Professor Bessel. They have been computed for Mean Midnight at Greenwich, according to the formulæ exhibited at page 435, omitting in C and D the terms depending on $2\,\mathbb{C}$.

In the form under which they now appear, they are chiefly used in conjunction with the Catalogue of the British Association,* which contains the Logarithms of the remaining factors depending on the Star's place; and for the reduction of any Star in that Catalogue, they appear to afford every facility that can be desired.

Where, however, the apparent place of any Star, *not in the British Association Catalogue*, is required, similar quantities to those must either be computed with reference to the particular Star, before we can use the A, B, C, D, or recourse must be had to other and independent means; such, for instance, as are afforded by the Table at pages 436 and 437, which serves equally for all Stars. The formulæ by which this Table has been constructed are given at page 435.

The following Examples will sufficiently illustrate the mode of using both Tables.

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* "The Catalogue of Stars of the British Association for the Advancement ; containing the Mean Right Ascensions and North Polar Distances of eight thousan and seventy-seven Fixed Stars, reduced to January 1, 1850: together with th ons, secular variations, and proper motions, as well as the logarithmic cons pre- cession, aberration, and nutation. With a Preface explanatory e and Application. By the late Francis Baily, Esq." London, 1845. 4to.

Required the Correction ($\Delta\alpha$) of the Right Ascension and ($\Delta\delta$) of the Declination of γ Orionis (No. 1687 B.A.C.) for Precession, Aberration, and Nutation, at Greenwich Mean Midnight, on February 5, 1855.

1.—By the B.A.C. Constants and the Logarithms of A, B, C, D.

Mean α, Jan. 1, 1850		5 17 5·33	Mean δ		+ 6 12 34·3
5 Years' precession and proper motion		+ 16·10	5 Years' precession and proper motion		+ 18·6
Mean α, Jan. 1, 1855		5 17 21·43	Mean δ		+ 6 12 52·9
	Logarithms.	Nat. Nos.		Logarithms.	Nat. Nos.
a	+ 8·0963		a'	+ 9·5120	
A	− 1·1345		A	− 1·1345	
a A	− 9·2308	− s 0·170	a' A	− 0·6465	− ″ 4·431
b	+ 8·8188		b'	+ 8·3039	
B	+ 1·1464		B	+ 1·1464	
b B	+ 9·9652	+ 0·923	b' B	+ 9·4503	+ 0·282
c	+ 0·5070		c'	+ 0·5721	
C	− 9·1055		C	− 9·1055	
c C	− 9·6125	− 0·410	c' C	− 9·6776	− 0·476
d	+ 7·1304		d'	− 9·9923	
D	− 0·7979		D	− 0·7979	
d D	− 7·9283	− 0·008	d' D	+ 0·7902	+ 6·169
		$\Delta\alpha$ = + 0·335			$\Delta\delta$ = + 1·544

2.—By the independent Constants.

For February 5, 1855, the Table at pages 436, 437, furnishes

f = − 5″·87; g = + 6″·78; G = 247° 50′; h = + 19″·54; H = 315° 47′; i = − 5″·92

α (*in time*) converted = 79° 20′ ------- 79° 20′

$G + \alpha$ = 327° 10′ $H + \alpha$ = 35° 7′

	Logarithms.	Nat. Nos.	Logarithms.	Nat. Nos.
f		− ″ 5·87		
g	+ 0·8312		+ 0·8312	
sin ($G + \alpha$)	− 9·7342		cos + 9·9244	
tan δ	+ 9·0370			
	− 9·6024	− 0·40	+ 0·7556	+ ″ 5·70
h	+ 1·2909		+ 1·2909	
sin ($H + \alpha$)	+ 9·7599		cos + 9·9127	
sec δ	+ 0·0026		sin + 9·0344	
	+ 1·0534	+ 11·31	+ 0·2380	+ 1·73
	$\Delta\alpha$ (*in arc*) =	+ 5·04		
	$\Delta\alpha$ (*in time*) =	+ 0ˢ·336	i − 0·7723	
			cos δ + 9·9974	
			− 0·7697	− 5·88
				$\Delta\delta$ = + 1·55

Hence the App. Right Ascens. of γ Orionis = 5 17 21·43 + 0ˢ·34 = 5 17 21·77

and the Apparent Declination = + 6° 12′ 52″·9 + 1″·6 = + 6° 12′ 54″·5

2. *Mean Time of Transit of the First Point of Aries.*

The time in this column shows the distance of the *mean* Sun from the meridian, at the instant when the *true* point of intersection of the ecliptic and equator (called the first point of Aries) is on the meridian of Greenwich; and as the distance of the first point of Aries from the meridian, at the instant the mean Sun is on the meridian, is denominated Sidereal Time at Mean Noon, this may, by analogy, be termed the *Mean Time* at *Sidereal Noon*. It is the time which ought to be shown by a mean time clock adjusted to the Greenwich meridian, at the moment that a clock, adjusted to sidereal time, indicates exactly $0^h\ 0^m\ 0^s$. The use of this column is to facilitate the reduction of sidereal to mean solar time, with the help of the Table of Time Equivalents, given at pages 588 and 589 of this volume, as has been already explained at page 602.

3. *Mean Equinoctial Time.*

Mean Equinoctial Time signifies the Mean Time elapsed since the instant of the Mean Vernal Equinox. The numbers in this column represent this time, at every Mean Noon, in Mean Solar days and fractional parts of a day; it is reckoned from the Mean Vernal Equinox of 1854, between January 1^d and March $22^d \cdot 581512$, but after March $22^d \cdot 581512$ from the Vernal Equinox of 1855; for the Equinoctial Year has been assumed, according to Bessel, (*Conn. des Temps*, 1831, Additions, page 154,) equal to $365 \cdot 242217$ Mean Solar days; and as the Equinoctial Time corresponding to the Mean Noon of March 22, 1855, is $364^d \cdot 660705$, it is evident that the Equinoctial Year of 1854–55 will be completed, and a new year commenced, at $0^d \cdot 581512$ after Mean Noon of the 22nd.

The Fraction of the day at the head of the column is common to all the days of the Equinoctial Year. Thus at Mean Noon of January 19, 1855, the Equinoctial Time is $302^d \cdot 660705$, and on January 20 it is $303^d \cdot 660705$, and so on until March $22^d \cdot 581512$, when the year terminates, and the fractional part of the day changes. At Mean Noon of March 23, 1855, the Equinoctial Time is $0^d \cdot 418488$, and this fraction is to be annexed to all the numbers in the column of days, from the period of the change until the equinox of 1856.

At the instant the Mean Sun arrives at the Mean Vernal Equinox, it must also be on *some* meridian, and this meridian will then have its equinoctial time corresponding with its Mean Solar time, each of which will be $0^h\ 0^m\ 0^s$, and they will continue to correspond throughout the Equinoctial Year. At the end of the Equinoctial Year, the Sun will have passed this meridian 365 times, and have performed, besides, a certain portion of its 366th diurnal revolution, viz. $0^d \cdot 242217$; it will, therefore, have arrived at some other meridian, which will now, in its turn, reckon the Mean Equinoctial and Mean Solar time from the same point, and remain constant for the year. Thus the meridian, from which the time is reckoned, is shifting its position at the end of every year by $0^d \cdot 242217$, or $5^h\ 48^m\ 47^s \cdot 55$, to the Westward. Between the Vernal Equinoxes of 1855 and 1856, this itinerant meridian corresponds to Longitude $0^d \cdot 418488$ East, or $10^h\ 2^m\ 37^s \cdot 36$, East of Greenwich.

This species of time was first introduced in the Supplement to the NAUTICAL ALMANAC for 1828, with a very full explanation of its nature and use. It there appears, that the use of Equinoctial Time is to afford an uniform date, which shall be independent of the different meridians, and of all inequalities in the Sun's motion, and shall thus save the necessity, when speaking of the time of any event's happening, of mentioning at the same time the place where it was observed or computed. Thus, it is the sa

thing to say that a comet passed its perihelion on January 5, 1855, at $5^h\ 47^m\ 0^s{\cdot}0$, Mean Time at Greenwich; at $5^h\ 56^m\ 21^s{\cdot}5$, Mean Time at Paris; or at $1854^y\ 288^d\ 21^h\ 38^m\ 24^s{\cdot}91$ Equinoctial Time; but the former dates make the localities of Greenwich and Paris enter as elements of the expression; whereas the latter expresses the period elapsed since an epoch common to all the world, and identifiable independently of all localities. By this means all ambiguities in the reckoning of time are supposed to be avoided.

To convert Mean Solar into Equinoctial Time: To the corresponding Greenwich Mean Time add the Equinoctial Time at Mean Noon of the same day at Greenwich: the sum will be the Equinoctial Time required. Thus, in the instance of the comet before alluded to, Paris being $9^m\ 21^s{\cdot}5$ East of Greenwich, subtract this from the Paris time and we get $5^h\ 47^m\ 0^s{\cdot}0$ for the corresponding Greenwich Time, to which add $288^d{\cdot}660705$, or $288^d\ 15^h\ 51^m\ 24^s{\cdot}91$, the Mean Equinoctial Time at Greenwich Mean Noon of January 5, and the sum will represent the Mean Equinoctial Time of the Comet's passage of its perihelion, viz., $288^d\ 21^h\ 38^m\ 24^s{\cdot}91$, from the Vernal Equinox of the year 1854.

4. *Day of the Year.*

The numbers in this column indicate the complete days at mean noon which have elapsed since mean noon of January 1. Mean noon of January 1 is therefore reckoned 0, and 1 is found opposite to that of January 2, because at that instant one entire day has elapsed.

5. *Fraction of the Year.*

These fractions are the quotients found by dividing the numbers in the preceding column by 365·25. The day and fraction of the year are useful in many Astronomical calculations.

Obliquity of the Ecliptic. (Page 242.)

The apparent inclination of the plane of the Ecliptic to that of the Equator is here given for every 10th day of the year, and continued to January 6 of the following year, marked December 37 for the sake of convenience. This inclination is ever varying, as well from the effect of its mean diminution, as of the nutation of the earth's axis: it is an important element in deducing the positions of the heavenly bodies, with reference to either of the planes, when we know their positions with respect to the other; as, for instance, in computing Right Ascensions and Declinations from Longitudes and Latitudes, and *vice versâ*. If the apparent Obliquity be required for any date not to be found in the Table, it may be obtained by simply taking the proportional part of the variation of the obliquity corresponding to the interval which comprises the given date. Thus, the apparent Obliquity on October 31, 1855, is $23°\ 27'\ 37''{\cdot}11$. For the variation of the Obliquity in the ten days between October the 28th and November the 7th, is $0''{\cdot}16$, or $0''{\cdot}016$ for one day, and this being multiplied by 3, the number of days between the 28th and the 31st, gives $0''{\cdot}05$, to be subtracted from the Obliquity of October the 28th. For most purposes, however, the Obliquity corresponding to the date in the Table nearest to the given date is sufficient, as is evident from an inspection of the quantities.

Sun's Horizontal Parallax. (Page 242.)

The Sun's Horizontal Parallax is the *greatest* angle under which the equatorial semidiameter of the earth would appear at the Sun's centre. It varies inversely as the distance, and the numbers in this column show the values for every tenth day of the year.

The Parallax serves for reducing a Solar observation made at the surface of the earth to what it would have been if made at the centre.

Sun's Aberration. (Page 242.)

The progressive motion of light, combined with the motion of the Earth in its orbit, causes the Sun to appear in a different position from that which he really occupies, the true position being always in advance of the apparent. The numbers in this column indicate, for every 10th day of the year, the amount of Aberration, or the quantity to be applied to the *true* longitude of the Sun to obtain the *apparent* longitude. The longitudes derived from the Solar Tables include Aberration, and are therefore *apparent* longitudes, such as are contained in this Ephemeris. If the *true* longitude of the Sun be wanted, as is the case in finding the longitude of the Earth for the calculation of the Geocentric place of a body, the aberration must be applied with a contrary sign. Thus, on June 10, 1855, at Mean Noon, by *adding* 20″·11, the amount of aberration, to 78° 59′ 12″·3, the apparent longitude of the Sun, we obtain 78° 59′ 32″·4 for the true longitude.

Precession in Longitude. (Page 242.)

This column contains the amount of the retrograde motion on the Ecliptic of the point of intersection of the Equator and Ecliptic, or first point of Aries, for each 10th day from January 1, 1855, and is useful for reducing a longitude reckoned from the *Mean* Equinox of any given date to that of January 1, or any other date. Thus, suppose it were required to refer the true longitude of the Sun on December 7, 1855, to the mean Equinox of January 1, 1855.

The *apparent* longitude, from the True Equinox of December 7, is 254° 52′ 11″·1; the aberration −20″·73 and the Equation of the Equinoxes −9″·48 being applied with the signs changed, give 254° 52′ 41″·31 for the *true* longitude from the mean Equinox of December 7; and subtracting 46″·80, the amount of precession, there results 254° 51′ 54″·51 for the true longitude of the Sun on December 7, but reckoned from the mean Equinox of January 1, 1855.

Equation of the Equinoxes. (Page 242.)

The Solar and Planetary Tables furnish us with the places of the Heavenly Bodies referred to the Mean Equinox; but the true place of the Eq[illegible]t any time differs from its mean place, by a quantity which is termed the E[illegible]he Equinoxes; and the numbers here given show the value of the Eq[illegible]y 10th day of the year. They are to be applied, with their proper si[illegible]ides reckon from the Mean Equinox, to obtain the values with[illegible]e Equinox

If the Longitude of a body be given with referen[illegible]ox, as in Ephemeris, and it be required to find its Longitude[illegible]an Equ the Equation of the Equinoxes must be applied[illegible]. Th longitude of the Sun, reckoned from the true E[illegible]55, at Noon, is 117° 8′ 48″·4, and the Equation of th[illegible]; the

applying it with the contrary sign, the sum 117° 8′ 58″·0, is the Sun's Longitude from the *Mean* Equinox on that day.

The Equation corresponding to any date not contained in the Table, may be obtained in the usual way by interpolation.

The Equation of the Equinoxes in Right Ascension, in a similar manner, enables us to find the *apparent* point of intersection of the Ecliptic *on the Equator;* and is necessary in computing Sidereal Time.

Mean Longitude of ☾'s ascending Node. (Page 242.)

This column contains the Mean Longitude of the Moon's ascending Node, at Mean Noon of every 10th day of the year, reckoned from the Mean Equinox. The place for any intermediate day is easily found from the daily motion inserted at the foot of the column. The Longitude of the Node is necessary in the calculation of Nutation; it is also sometimes used to determine roughly the Stars which are likely to undergo occultation by the Moon.

Sun's Co-ordinates. (Pages 243 to 250.)

These pages contain for each Greenwich Mean Noon the Sun's true Geocentric Co-ordinates X, Y, Z; X being measured on a line passing through the true Vernal Equinoctial point of the date; Y, on a line in the plane of the Equator, in the direction of the first point of Cancer; and Z, perpendicular to the plane of the Equator, towards the North. To facilitate cometary calculations the values of Δ X, Δ Y, Δ Z, are given for converting the co-ordinates X, Y, Z, referred to the true Equinox of the date, into co-ordinates referred to the Mean Equinox of January 1, 1855.

Ephemeris of the Planets. (Pages 251 to 431.)

These pages contain the Geocentric and Heliocentric Places of the Planets, Mercury, Venus, Mars, Vesta, Juno, Pallas, Ceres, Jupiter, Saturn, and Uranus.

The Geocentric places are the places of the centres of the planets, as they would appear from the centre of the Earth; the Heliocentric, such as they would appear from the centre of the Sun.

The positions of the larger planets are given for Greenwich Mean Noon and the Time of Transit on every day of the year. But those of the minor Planets are given approximately at Noon of every fourth day, and accurately for three months, preceding and following their respective Oppositions, at Time of Transit on each day. The Geocentric Right Ascensions and Heliocentric Longitudes, are reckoned from the True Equinox. The Geocentric Right Ascensions and Declinations *are affected with aberration*, and are therefore *apparent* positions.

By means of the positions of Venus, Mars, Jupiter, and Saturn, and particularly of Venus and Jupiter, which are frequently visible when the Sun is above the horizon, the Latitude, Time, and Variation of the Compass, may be found with nearly as much facility and accuracy as by the Sun.

The column headed "Meridian Passage" shows the Mean Time of the Planet's Transit over the meridian of Greenwich, and serves to find the Mean Time of Transit over any other meridian. As in the instance of the Moon before noticed, there are some days on which the planets do not pass the meridian; these are indicated by two asterisks (* *). If we refer to page 252, we shall find that Mercury does not pass over the Greenwich meridian on January 16th, and for a similar reason, viz., that the planetary day is here longer than the mean solar day, and commences so near,

but previously, to the noon of the 16th, viz., $0^m \cdot 5$, as to want still $2^m \cdot 7$ of its completion at the termination of the 16th day. The planetary day therefore, includes the solar day of January 16th: it begins *before* the solar day and ends *after* it, and the planet cannot arrive at the meridian at any period of it.

Another phenomenon takes place in the case of the planets, which, however, does not occur with the Moon; it is that of two transits on the same day, which arises from the planetary day being sometimes *shorter* than the solar day, commencing *after* and terminating *before* the solar day, and thus falling entirely within it. This cannot be the case with the Moon, because the lunar day is always greater than the solar day. When two transits occur, the times of both are registered, as at page 256, March 6th, where it appears that Mercury passes the Greenwich meridian $5^m \cdot 8$ after Mean Noon of the 6th, and again at $23^h\ 58^m \cdot 3$ on the same day, or $1^m \cdot 7$ before the arrival of the following Mean Noon.

The positions of the planets for any time not given in the Ephemeris, and under any other meridian than that of Greenwich, are to be found by interpolation in the usual way. *Example:* Required the Right Ascension and Declination of Venus at 6^h Mean Time on May 15, 1855, in longitude 30° west of Greenwich; also the time of Venus' passage over this meridian on the same day. The difference of longitude 2^h *added* (because it is west) to the given time, gives 8^h for the corresponding Greenwich time.

1. *For the Right Ascension.* The Right Ascension on May 15 is $6^h\ 0^m\ 12^s \cdot 42$, and on May 16 it is $6^h\ 5^m\ 24^s \cdot 60$; the difference $5^m\ 12^s \cdot 18$, is the variation of the Right Ascension in 24 mean hours; therefore $24^h : 5^m\ 12^s \cdot 18 :: 8^h : 1^m\ 44^s \cdot 06$, the proportional part of the variation answering to 8^h; and this proportional part added (because the Right Ascensions are increasing) to $6^h\ 0^m\ 12^s \cdot 42$, the Right Ascension at mean noon on May 15, gives $6^h\ 1^m\ 56^s \cdot 48$ for the Right Ascension required.

2. *For the Declination.* The Declination on May 15 is N. 25° 20′ 36″·9, and on the 16th it is N. 25° 21′ 59″·2, the difference, 1′ 22″·3, is the variation in 24 hours; and the proportional part of this variation for 8^h is 0′ 27″·4, which, added to the Declination at noon on the 15th, gives N. 25° 21′ 4″·3 for the Declination required.

3. *For the Meridian Passage.* Take the difference of the times of two consecutive transits; and considering this difference as an acceleration or retardation of the Meridian Passage while the planet has passed over 24^h of geographical longitude, take the proportional part of it, due to the difference of meridians, for a correction to be applied to the Meridian Passage at Greenwich, bearing in mind that in east longitudes the passage precedes that at Greenwich, when times are accelerated, and follows it, when they are retarded; and the contrary in west longitude. In the present case Venus passes the meridian of Greenwich on May 15 at $2^h\ 29^m \cdot 7$, and on May 16 at $2^h\ 31^m \cdot 0$, the difference is $1^m \cdot 3$, therefore $24^h : 1^m \cdot 3 :: 2^h : 0^m \cdot 1$, the proportional part to be added to $2^h\ 29^m \cdot 7$, (because the passages are accelerated, and the longitude is west of Greenwich,) which gives $2^h\ 29^m \cdot 8$, mean time at the given place, for the Meridian Passage. Where great accuracy is not required, as in predicting the time of passage, in order to be prepared for observing the altitude of the planet on the meridian, for the determination of the latitude, this method will suffice.

The Right Ascension and Declination at Transit over the Meridi
wich, are readily reduced to the time of transit over any other m
distant, by means of their Variations in 1 hour of Longitude. Th

sign — to the Longitude of the proposed meridian if it be east of Greenwich, but + if it be west, and multiply it by the variation; the product applied *algebraically* (South Declination being considered as negative) to the transit results for Greenwich, will give those for the proposed meridian. *Example:* Suppose the Right Ascension and Declination of Venus were required at Vienna on August 23rd, 1855. Vienna is east of Greenwich $1^h\ 5^m\ 31^s{\cdot}9$, or $-\ 1^h{\cdot}092$, and the "Variation of Right Ascension in 1 hour of Longitude" on August 23rd is $+\ 4^s{\cdot}37$: the product of these numbers is $-\ 4^s{\cdot}77$, which, applied to $12^h\ 30^m\ 34^s{\cdot}15$, the Transit Right Ascension at Greenwich, gives $12^h\ 30^m\ 29^s{\cdot}38$ for that at Vienna. The Variation of the Declination on August 23rd is $-\ 54''{\cdot}4$, and the product of $-\ 54''{\cdot}4$ and $-\ 1^h{\cdot}092$ is $+\ 0'\ 59''{\cdot}4$, which applied to S. or $-\ 7°\ 54'\ 39''{\cdot}0$, gives S. $7°\ 53'\ 39''{\cdot}6$ for the Declination at Vienna.

The "Sid. Time of Sem. pass. Mer." (Sidereal Time of the Semidiameter passing the Meridian,) serves to reduce an observation of the Right Ascension of the limb, to that of the centre, and the "Semidiameter" answers a similar purpose for the Declination.

The "Hor. Par.," or Horizontal Parallax, serves for reducing an observation made at the surface to the centre of the Earth.

Fixed Stars. (Pages 432 to 479.)

In pages 432 to 434 are given the mean Right Ascensions and Declinations of 100 principal fixed Stars for Jan. 1, 1855, together with their Annual Variations.

North Declination is distinguished by N., and South Declination by S.

The sign + prefixed to an Annual Variation of Right Ascension indicates that the variation is to be *added to*, and the sign —, that it is to be *subtracted from*, the Right Ascension: also, for Stars having *North* Declination, + signifies *add*, and — *subtract:* but for Stars of *South* Declination, + denotes that the Variation is to be *subtracted from*, and — that it is to be *added to*, the Declination.

Example 1. Required the Mean Right Ascension and Declination of α Tauri or *Aldebaran* on May 31, 1855. The Annual Variation of the Right Ascension is $+\ 3^s{\cdot}4338$; the Fraction of the year corresponding to May 31, is ·411 (page XX. of May); the product of these numbers ($1^s{\cdot}411$) is the proportional part of the annual variation due to the period elapsed since January 1, which *added*, because the sign is +, to the Mean Right Ascension on Jan. 1, *viz.*, $4^h\ 27^m\ 36^s{\cdot}272$, gives $4^h\ 27^m\ 37^s{\cdot}683$, for the Mean Right Ascension on May 31. The Annual Variation of the Declination is $+\ 7''{\cdot}691$, which, multiplied by ·411 as before, and the product ($3''{\cdot}16$) *added*, because the sign is + and the Declination *North*, to the Mean Declination on Jan. 1, 1855, *viz.*, N. $16°\ 12'\ 49''{\cdot}27$, gives N. $16°\ 12'\ 52''{\cdot}43$, for the Mean Declination required.

Example 2. Required the Mean Right Ascension and Declination of β Ursæ Minoris on June 1, 1855. Here the Annual Variation of Right Ascension is $-\ 0^s{\cdot}2644$, and the fraction of the Year ·413 (page XX. of June); the product ($0^s{\cdot}109$) therefore being *subtracted*, because the sign of the Annual Variation is —, from $14^h\ 51^m\ 10^s{\cdot}714$, the Right Ascension on Jan. 1, gives $14^h\ 51^m\ 10^s{\cdot}605$, for the Right Ascension on June 1, 1855.

For the Declination, we have the Annual Variation $= -\ 14''{\cdot}754$, which, multiplied by ·413, gives $6''{\cdot}09$. The Declination being *North*, and the sign of the Variation —, this product must be *subtracted* from N. $74°\ 44'\ 52''{\cdot}53$, and the result is N. $74°\ 44'\ 46''{\cdot}44$.

Example 3. Required the Mean Declination of α Scorpii or *Antares* on May 31, 1855. The Annual Variation is — 8″·461, and the fraction of the Year ·411 ; the product of these numbers (3″·48) being *added*, because the Declination is *South*, and the sign of the Variation —, to the Declination on Jan 1, *viz.*, S. 26° 6′ 21″·24, the sum, S. 26° 6′ 24″·72, is the Declination on May 31, 1855.

Next (page 435) follow Bessel's Formulæ of Reduction ; and (pages 436 and 437) a Table for the reduction of Stars, independently of the Constants, in the Catalogue of the British Association, an example of which is given at page 610.

The apparent places of α and δ Ursæ Minoris are given for every day of the year, and those of the remaining 98 Stars for every *tenth* day. They indicate the positions which ought to be shown by perfect instruments at the time of the Stars' transit over the meridian of Greenwich ; and, therefore, supposing the catalogue of mean places to be correct, they serve to detect any errors of the instruments.

The hours and minutes of Right Ascension, and the degrees and minutes of Declination, are placed at the heads of the columns as constants, and belong equally to all the numbers below them. This arrangement has rendered it necessary in numerous instances, to continue the seconds beyond 60, as the width of the page would not permit of otherwise indicating any change in the minutes. Thus, the apparent Right Ascension of β^1 Scorpii at page 464, on June 20, 1855, is registered $15^h\ 56^m\ 62^s{\cdot}70$, and is to be read $15^h\ 57^m\ 2^s{\cdot}70$. Again the Declination of ζ Ursæ Minoris (same page), on September 18, is registered N. 78° 13′ 83″·7, which signifies N. 78° 14′ 23″·7.

The small figures on the right hand of the vertical column of seconds represent the differences for the quantities above and below them on the left, or the variation of Right Ascension and Declination in 10 days, and serve to find, by interpolation, the values for an intermediate day. As in the case of the Planets before explained, a Star will sometimes arrive at the meridian twice in one Apparent Solar day. When this occurs on one of the given dates, the Star's place is registered for each Transit, as at page 459, for α^1 Crucis on Sept. 28 ; but in other cases the day of the Month on which two Transits occur is placed opposite to the interval. In these particular instances the Star passes the meridian 11 times in the 10 Apparent Solar days, and consequently the Right Ascension or Declination at transit on any intermediate day is to be determined by taking $\frac{1}{11}$th part, instead of $\frac{1}{10}$th, of the variation in the interval. Thus, at page 450, we find in the instance of ϵ Orionis the figures 14 opposite the interval between June 10 and June 20, indicating that the double transit occurs on June 14, and a difference of $0^s{\cdot}13$ opposite to the interval between the seconds belonging to those dates, $\frac{1}{11}$ of which is ·012 ; for the first Transit on June 14, we should therefore multiply ·012, by the days elapsed since June 10, but for the second and following Transits by the days elapsed increased by 1.

When extreme accuracy is required, the apparent places of the 5 Polar Stars demand a further correction, depending on the terms which involve 2 ☾ . The apparent places do not include these corrections, on account of the rapid variation of the argument, viz., about 26° in a day, but they are given in a Table at pages 478, 479, for every degree of the Moon's Longitude, and may be readily applied, agreeably to the precept at the foot of that Table.

Formulæ for correcting for *daily* aberration are given in the Preface.

Moon-Culminating Stars. (Pages 480 to 522.)

Those Stars are denominated Moon-Culminating Stars, w[illegible] near the Moon's parallel of Declination, and not differing much from [illegible] Ascension

are proper to be observed with the Moon, in order to determine differences of meridians. This is effected by comparing the differences of the observed Right Ascensions of such a Star and the Moon's bright limb at any two meridians. If the Moon had no motion, the difference of her Right Ascension from that of the Star would be constant at all meridians; but in the interval of her transit over two different meridians, her Right Ascension will have varied, and the difference between the two compared differences will exhibit the amount of this variation, which added to the differences of the meridians, shows the angle through which the westerly meridian must revolve before it comes up with the Moon; hence, and knowing the rate of her increase in Right Ascension, the difference of Longitude may be easily obtained.

For the determination of this variation, recourse has hitherto been had to actual observations made at different meridians, because any errors in the computed places of the Moon and Stars are thereby avoided: and the places were formerly given merely with the view of indicating the times when the observations were to be made. In the present List, however, the Right Ascensions are given with every possible degree of accuracy, so that they may be considered, at least approximately, in the light of corresponding observations made at Greenwich, and be taken to represent the indications of the Greenwich instruments, the same as though they had been actually observed. The traveller has thus an opportunity of rendering his observations immediately available for determining his longitude with considerable accuracy.

The Right Ascension of the Moon's bright limb and *Declination of her centre*, at the instant of their respective transits at Greenwich, are given for the lower as well as the upper Culmination, L. being put to denote the Lower Culmination, and U. the Upper Culmination; the Roman numerals indicate the limb of the Moon with reference to its transit over the meridian. The Moon's age at the time of her upper transit, to the nearest tenth of a day, is inserted in the column containing the magnitudes of the Stars.

The numbers in the column "Var. of ☾'s R.A. in one hour of Long." represent the Variation in Right Ascension of the Moon's Limb during the interval of her transit over two meridians, equidistant from that of Greenwich, and *one* hour distant from each other. They have been deduced from the Right Ascensions of the *bright limb*, and therefore include the effect produced by the change of the semi-diameter.

They serve to determine the Longitude where the difference of meridians is not very great; but where this difference is considerable, and extreme accuracy is wanted, that variation in Right Ascension should be used which corresponds to the middle of the interval between the observations, which may be readily obtained by interpolation. They also serve to determine the Right Ascension of the bright limb at its transit over any other meridian. Thus: Multiply the difference of longitude between Greenwich and the given meridian, by the variation; and, according as the given meridian is east or west of Greenwich, subtract or add the product to the Right Ascension at Greenwich; the result will be the Right Ascension of the bright limb at transit over the proposed meridian. *Example:* On October 27, 1855, the Right Ascension of the Moon's second limb is $4^h\,33^m\,24^s\cdot34$, at its upper transit at Greenwich, and the variation for 1 hour of longitude is $150^s\cdot85$: Required the Right Ascension of the limb at its upper transit at Paris. Paris is $9^m\,21^s\cdot5$, or $0^h\cdot156$, East of Greenwich; therefore, multiplying $150^s\cdot85$ by $0\cdot156$, and subtracting the product $23^s\cdot53$ from $4^h\,33^m\,24^s\cdot34$, we have $4^h\,33^m\,0^s\cdot81$, for the Right Ascension at Paris.

In a similar manner the Declination may be determined at transit over any other meridian not far distant from that of Greenwich, bearing in mind that South

Declinations and East Longitudes are to be considered as *negative*. Thus, in the above *Example*: The Moon's Declination at her upper Transit at Greenwich is N. 25° 6′ 44″·6 and the "Var. of ☾'s Dec. in 1 hour of Long." is + 466″·1, which, multiplied by — 0^h·156, gives — 1′ 12″·7, to be applied to N. or + 25° 6′ 44″·6, the Declination at the upper transit at Paris is therefore N. 25° 5′ 31″·9.

Where an asterisk is placed opposite to a Star's name, it is intended to denote that the Star is favourably situated for observing its Declination along with that of the Moon in both Hemispheres, with a view to the accurate determination of the Moon's Parallax.

The numbers in the column entitled "Sid. Time of ☾'s Sem. pass. mer.," express the Sidereal intervals which the Moon's Semidiameter, at the time of transit at Greenwich, takes in passing the meridian, and therefore serve to determine the Transit of the centre from an observed Transit of either limb.

Phenomena. (Pages 523 to 564.)

Pages 523 to 528 contain all the particulars necessary for indicating the times, places, &c. on the Earth where the Eclipses of the Sun and Moon will be visible; also the Elements which have been used in the calculations.

Pages 529 to 531 contain a list of the Planets and fixed Stars to the sixth magnitude inclusive, the Occultations of which by the Moon will happen when the objects are above the horizon of Greenwich, together with the Sidereal and Mean Times of the Disappearance and Reappearance, and the points on the circumference of the Moon's image, where the Star, viewed with a telescope that inverts, will disappear and reappear. By "Angle from N. Point" is to be understood the arc included between the Star, when in contact, and the point of intersection of the limb with a circle passing through the North Pole and the centre of the Moon's image; and by "Angle from Vertex," the arc between the Star at contact, and the point where a circle, passing through the zenith and the Moon's centre, intersects the limb; the angles in all cases being reckoned towards the right hand round the circumference of the Moon's image as seen in an inverting telescope. These latter angles will be found very useful in observing Occultations of small stars with a telescope not mounted equatorially; and, for the observation of a reappearance, a knowledge of the angle is absolutely necessary to enable the observer to direct his attention to the point of the Moon's limb where the Star will reappear. In some instances, Occultations have been inserted, which taking place in, or near to, the horizon of Greenwich, are not visible there, but may be visible at places not far distant from Greenwich.

Pages 532 to 560 contain the Mean Times of the Eclipses, Occultations, Transits, and Transits of Shadows, of the Satellites of Jupiter, together with diagrams exhibiting the position of each Satellite with respect to the disc of the Planet at the moment of Disappearance or Reappearance, as it will appear in an inverting telescope. These diagrams have been laid down from calculations made for the eclipse nearest to the middle of each month; but they will serve very well for the whole of the month, *except near opposition*, the change in the position of Jupiter and his Shadow in the interval being too small to be appreciable by the eye, as is evident by comparing the Phases for any two successive months. All the Eclipses which happen [illegible]er is 8° *above* and the Sun 8° *below* the horizon of Greenwich, are n[illegible] asterisk to indicate that they are visible at that place; and those wh[illegible] Jupiter is above, and the Sun below the horizon, are marked with a [illegible] very favourable circumstances, they may also be observed.

"Disapp." denotes the instant of the disappearance of the Satellite, by entering into the shadow of Jupiter; and "Reapp." the instant of its reappearance at coming out of the shadow. They generally happen when the Satellite is apparently at some distance from the body of Jupiter, except near the opposition of Jupiter to the Sun, when the eclipse takes place near to the body of the planet. Before the opposition, the Disappearances and Reappearances happen on the Western side, but after opposition on the Eastern side, of the planet: with an inverting telescope, however, the appearances will be directly the contrary. Before the opposition, the Disappearances only of the first Satellite are visible: and after the opposition, the Reappearances only. It is seldom, also, that the Disappearance and Reappearance of the second Satellite can be observed at the same eclipse; but both phenomena are generally visible with the third and fourth Satellites.

To find the time at which the Disappearance or Reappearance of any of the Satellites will take place under any other meridian than that of Greenwich, it is merely necessary to *add* the difference of longitude (*in time*) to the time of the phenomenon at Greenwich, if the meridian be *east* of Greenwich, or to *subtract* if it be *west*, and the sum or difference will be the time required. But this determines only the instant of the occurrence of the phenomenon: Jupiter may be below the horizon at this time, or he may be above it, and the intensity of sun-light, or even the brightness of twilight, may be such as to render the Satellites invisible: it is therefore necessary to ascertain the position of the Sun and Jupiter, with respect to the horizon, at the time of the phenomenon: this may be readily accomplished by means of a celestial globe, or near enough for the purpose, by finding the times of rising and setting of the objects, with the assistance of a table of semidiurnal arcs.

The Eclipses of Jupiter's Satellites, especially of the first, afford us, perhaps, the readiest means of determining the longitude; all that is necessary to be known being the exact time of observation: the difference between this time and the time at Greenwich, shows the difference of longitude at once, and it is *east* or *west* of Greenwich, according as the time of observation is *greater* or *less* than the Greenwich time.

Suppose the Disappearance of Jupiter's first Satellite to be observed on July 27, 1855, at Paris at $13^h\ 58^m\ 51^s{\cdot}3$ Mean Time at that place: by reference to page 546, it appears that the Disappearance will take place at Greenwich at $13^h\ 49^m\ 29^s{\cdot}8$ Greenwich Mean Time; the difference, $9^m\ 21^s{\cdot}5$, is the difference of longitude between Greenwich and Paris; and because the Paris time is greater than that at Greenwich, we infer that Paris is to the east of Greenwich.

Independent of defects in the tables, there are difficulties attending the observation of these phenomena which unfit them for *accurate* determinations of longitude. Different telescopes give different results; and care should be taken to have recourse to those corresponding observations which have been made under circumstances the most similar, and particularly with telescopes of the same quality and power. When extreme accuracy is not required, the Eclipses of the Satellites will always afford a good approximation towards the difference of meridians, and observations of them should on no account be neglected, especially when the Disappearance and Reappearance of the same Satellite are both visible.

The times of Occultation and Transit, are only approximate. They are inserted in order to apprise Astronomers when they are about to happen, as observations of them may tend to improve the Tables of the Satellites. The instruments required to observe them with anything like precision will preclude the possibility of *their ever* becoming available at sea.

An asterisk signifies that the phenomenon is visible at Greenwich, and a dagger that the phenomenon *may be* visible under favourable circumstances, the limits in either case being the same as those adopted for the eclipses. "Disapp." denotes the disappearance of the Satellite behind the disc of Jupiter, and "Reapp." its reappearance; "Ingress" signifies the beginning of a transit of a Satellite, or its shadow, across the disc of Jupiter, and "Egress" the termination.

On pages 561 to 564 are given the conjunctions in Right Ascension of the Planets with the Moon and with each other, and the conjunctions in Right Ascension and Declination of the Planets with certain Stars; also the times when the Planets are in those parts of their orbits most favourable for observation, with a view to the more accurate determination of their elements; and other notices, chiefly of use to the astronomer.

Saturn's Ring. (Page 565.)

On this page are given the quantities which enable us to determine the position of the Ring of Saturn at intervals of 20 days throughout the year, and whether it be visible or not. The value of p shows the position of the minor axis of the Ring with respect to a circle of declination, those of a, b, a', b', the Ring's apparent magnitude and a comparison of those of l and l', its visibility or otherwise. For the plane of the Ring to be *visible*, it is necessary that the Sun and the Earth should be elevated on the same side of it, which is the case during the whole of 1855. The circumstances which determine the *invisibility* of the Ring are, 1st, when its plane passes through the centre of the Sun, or $l' = 0$; 2nd, when it passes through the centre of the Earth, or $l = 0$, and at this time b also $= 0$; 3rd, when the Sun and Earth are on different sides of the plane of the Ring, for the Earth in this case will have the unilluminated side of the Ring turned towards it.

Tides. (Pages 566 to 569.)

The Mean Time of High Water at London Bridge is here given for every day of the year, on the assumption that the time of high water on full and change days, or the *Establishment of the Port*, is $2^h\ 7^m$. The first high tide which happens after Mean Noon of any day is inserted in the 1st column, and the second in the 2nd column. Where a line (—) is inserted, it indicates that there is only *one* high tide on that day. Thus on April 27 there is only one high tide: it occurs at $11^h\ 33^m$, but the succeeding high tide does not take place until 3^m after mean noon of April 28.

The times of high water at full and change of the Moon, as given at pages 568 and 569, are reckoned from *Apparent* Noon: they represent the *Establishments of the Ports*, that is, the *actual times* of High Water *when the Moon passes the meridian at the same time as the Sun;* or the *intervals* between the times of Transit of the Moon and the times of High Water *on full and change days.* They serve to determine the time of high water on any other day at those places in the usual manner.

Tables. (Pages 570 to 596.)

Page 570 contains two Tables, the first showing the *Mean Time* [illegible] *greatest Libration of the Moon's Apparent Disc;* and the second, the *Ill* [illegible] *rtion of the Discs of Venus and Mars* at the middle of each month.

Pages 571 to 582 contain Elements for facilitating the comp [illegible] ltations of certain Stars by the Moon.

These are:—1. The *Apparent* places at Greenwich Mean Midnight, of the Fixed Stars to the sixth magnitude inclusive, the occultations of which will take place above the horizon at Greenwich.

2. The *Apparent* Places of those Planets and *all* Stars to the fifth magnitude inclusive, the occulations of which will be visible at *some* part of the Earth.

3. The Greenwich Mean Time at which the Moon would, if viewed from the centre of the Earth, appear to have the same Right Ascension as the Star.

4. The difference of Declination and Position of the Moon, as it would appear with respect to the Star at the instant of conjunction in Right Ascension.

5. The parallels of Latitude *beyond* which the Star cannot be occulted by the Moon.

These Elements are useful in the calculation of an Occultation, for being referable to the Moon and Star, as seen from the centre of the Earth, they are independent of geographical position, and serve equally for all places. It is only necessary to apply the difference of longitude from Greenwich to the Greenwich Mean Time of conjunction, to find the time of conjunction at any other meridian; and it is this time to which the positions of the Moon and Star here given will equally correspond.

Thus, the position of the Moon and μ Piscium on Jan. 23, 1855, at $13^h\ 40^m\ 7^s$, Mean Time at Greenwich, is the position at $13^h\ 49^m\ 28^s{\cdot}5$ Mean Time at Paris, because Paris is $9^m\ 21^s{\cdot}5$ east of Greenwich.

By Limiting Parallels are to be understood those parallels of latitude beyond which an occultation cannot *possibly* occur.

Suppose an observer situate at a star, and having the Moon between him and the Earth, and that he could see the Moon projected on the Earth's disc; he would observe it moving across the disc from west to-east, covering a zone whose breadth would be equal to the apparent diameter of the Moon. Now it is only within the limits of this zone that the Occultation of a Star by the Moon can take place. To all the places through which the boundary lines pass, the Star will appear just to touch the Moon's limb; and that projected parallel of latitude, to which one of the boundary lines is a tangent, is one of the limiting parallels, while the intersection of the other boundary line with the circumference of the Earth's disc determines the other limiting parallel.

Limiting Parallels are useful to indicate whether at a given conjunction of a Star with the Moon, the positions are likely to produce an occultation in a given latitude, and thus to save considerable labour to the computer.

Thus, suppose from the times of conjunction commencing with April 5, at page 574, it were required to prepare a list of Occultations for Greenwich, whose latitude is 51° 28′ 38″ N. On looking down the column of Limiting Parallels we reject at once the first star, because the Limiting Parallels do not comprise the parallel of Greenwich. On the same day we see that δ Scorpii may be occulted to all the parallels of latitude between 53 N. and 21 S., which include that of Greenwich; this Star would therefore be fixed upon for calculation if no other considerations existed to cause its rejection. We observe, however, that the conjunction takes place at $19^h\ 51^m\ 42^s$, the intensity of sun-light would therefore prevent its being seen, and it would be rejected in consequence. The next Limiting Parallels having Greenwich between them, are 62 N. and 7 S., opposite 25 Scorpii, on the following day. The time of conjunction in this instance, as regards sun-light, is favourable; if, therefore, on further inquiry, the Star be found to be above the *horizon* of Greenwich, we should commence the calculation. It appears on

reference to page 529, that a near approach of the Moon to this star is visible at Greenwich. On April 7, 3 Sagittarii may be occulted between the parallels of 62 N. and 10 N.; and on reference to page 529, it will be seen that the phenomenon is visible at Greenwich.

In pages 583 to 585 are given Tables for determining the Latitude by Observations of the Pole Star out of the Meridian. The method of using them is as follows:

From the observed altitude, when corrected for the error of the instrument, refraction, and dip of the horizon, subtract 1′.

Reduce the Mean Time of Observation at the place to the corresponding Sidereal Time, by the Table given at page 586.—(See *Tables of Time Equivalents*, following this article.)

With the Sidereal Time found, take out the *first correction*, with its proper sign. If the sign be +, the correction must be *added* to the reduced altitude; but if it be —, it must be *subtracted*; in either case the result will give an Approximate Latitude.

With the Altitude and Sidereal Time of observation, take out the *second correction*; and with the day of the month and the same Sidereal time, take out the *third correction*. These two corrections *added* to the Approximate Latitude, will give the Latitude of the place.

Example: On March 6, 1855, in Longitude 37° W. at $7^h\ 43^m\ 35^s$ Mean Time, suppose the altitude of the Pole Star, when corrected for the error of the instrument, refraction, and dip of the horizon, to be 46° 17′ 28″: Required the latitude.

	h	m	s	h	m	s
Mean Time	7	43	35			
Diff. Long. (37°) in time	2	28	0			
Greenwich Mean Time	10	11	35			
Sidereal Time at Greenwich Mean Noon				22	54	37
Mean Time at Place				7	43	35
Acceleration (Tab. page 586) for $10^h\ 12^m$					1	41
Sidereal Time of Observation				6	39	53

	°	′	″
Corrected Altitude	46	17	28
Subtract		1	0
Reduced Altitude	46	16	28
With *Argument* $6^h\ 39^m\ 53^s$, *First Correction*	—	0	10	12
Approximate Latitude	46	6	16
Arguments, 46° 17′, $6^h\ 40^m$ } *Second Correction*	+1	9
Arguments, March 6, 1855. $6^h\ 40^m$ } *Third Correction*	+1	24
Latitude of the place — N.	46	8	49

which differs only 1″ from an actual trigonometrical computation.

Second Differences in finding the Greenwich Time corresponding to a
Lunar Distance.

The use of this Table has been sufficiently explained, by the Examples g
page 607.

The concluding Table, at pages 591 to 596, contains the *Latitudes and Lo*
of the principal Observatories. This table has been considerably improv
will, it is hoped, be gradually perfected by communications from each astr
of the latest and most accurate determination of his geographical position.

SUPPLEMENT

TO

THE NAUTICAL ALMANAC,

FOR THE YEAR

1855.

THE contents of the present Supplement are:—

1. Ephemerides of the newly-discovered Planets for the year 1852, with the Elements of the Orbits from which they have been derived, in alphabetical order.

2. Elements and Ephemeris of Encke's Comet.

The Elements and Ephemerides of the Planets have been obtained, through the kindness of Professor ENCKE, from those prepared for the *Berliner Astronomische Jahrbuch* for 1854, by simple reduction to the meridian of Greenwich:—The Elements and Ephemeris of the Comet, from a MS. copy for the meridian of Berlin, also supplied by Professor ENCKE.

I. EGERIA.

Epoch, 1852, March 15·0 Mean Time

		°	′
Mean Longitude	ε	162	28
Longitude of the Perihelion	ϖ	118	17
Longitude of Ascending Node	ν	43	17
Inclination of the Orbit	i	16	3?
Angle of Excentricity	φ	4	?
Mean daily Sidereal Motion	n	854″	

Equ
ocl

II. Eunomia.

Epoch, 1852, July 13·0 Mean Time at Berlin.

Mean Longitude	ε		26	52	33·4	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ		27	34	16·7	
Longitude of Ascending Node	ϑ		293	53	56·2	
Inclination of the Orbit	i		11	43	39·9	
Angle of Excentricity	φ		10	52	7·0	
Mean daily Sidereal Motion	n		823″·33685			

III. Flora.

Epoch, 1852, March 24·0 Mean Time at Berlin.

Mean Longitude of ♀	ε		174	45	31·8	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ		32	49	44·7	
Longitude of Ascending Node	ϑ		110	20	52·5	
Inclination of the Orbit	i		5	53	3·2	
Angle of Excentricity	φ		9	1	15·8	
Mean daily Sidereal Motion	n		1086″·07895			

IV. Hebe.

Epoch, 1852, July 13·0 Mean Time at Berlin.

Mean Longitude of ♁	ε		47	25	54·3	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ		15	15	25·7	
Longitude of Ascending Node	ϑ		138	31	55·3	
Inclination of the Orbit	i		14	46	32·1	
Angle of Excentricity	φ		11	39	15·8	
Mean daily Sidereal Motion	n		939″·37723			

V. Irene.

Epoch, 1852, July 13·0 Mean Time at Berlin.

Mean Longitude	ε		323	47	24·6	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ		178	26	57·5	
Longitude of Ascending Node	ϑ		86	51	32·5	
Inclination of the Orbit	i		9	5	33·2	
Angle of Excentricity	φ		9	46	25·4	
Mean daily Sidereal Motion	n		855″·23368			

VI. Iris.

Epoch, 1852, June 8·0 Mean Time at Berlin.

Mean Longitude of ☉	ε	85	44	36·1	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ	41	20	21·5	
Longitude of Ascending Node	ϑ	259	44	5·2	
Inclination of the Orbit	i	5	28	15·6	
Angle of Excentricity	φ	13	26	8·0	
Mean daily Sidereal Motion	n	963″·13955			

VII. Metis.

Epoch, 1852, June 4·0 Mean Time at Berlin.

Mean Longitude of ♁	ε	255	12	56·6	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ	71	33	10·9	
Longitude of Ascending Node	ϑ	68	28	57·7	
Inclination of the Orbit	i	5	35	54·7	
Angle of Excentricity	φ	7	3	18·0	
Mean daily Sidereal Motion	n	962″·18010			

VIII. Neptune.

Epoch, 1852, September 3·0 Mean Time at Berlin.

Mean Longitude of ♆	ε	341	1	55·0	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ	47	16	35·7	
Longitude of Ascending Node	ϑ	130	8	50·0	
Inclination of the Orbit	i	1	46	59·0	
Angle of Excentricity	φ	0	29	58·5	
Mean daily Sidereal Motion	n	21″·55448			

IX. Parthenope.

Epoch, 1852, July 13·0 Mean Time at Berlin.

Mean Longitude	ε	86	2	56·0	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ	317	3	50·6	
Longitude of Ascending Node	ϑ	124	59	53·6	
Inclination of the Orbit	i	4	36	54·3	
Angle of Excentricity	φ	5	37	32·7	
Mean daily Sidereal Motion	n	926″·32568			

X. Victoria.

Epoch, 1852, January 16·0 Mean Time at Berlin.

			°	′	″	
Mean Longitude		ε	112	55	44·4	From Mean Equinox of the Epoch.
Longitude of the Perihelion		ϖ	301	53	33·3	
Longitude of Ascending Node		ν	235	30	7·5	
Inclination of the Orbit		i	8	23	12·5	
Angle of Excentricity		φ	12	37	16·3	
Mean daily Sidereal Motion		n	994″·60137			

Encke's Comet.

Epoch, 1852, March 14^{d} 20^{h} Mean Time at Berlin.

			°	′	″	
Mean Anomaly	M		0	0	6·28	From Mean Equinox of the Epoch.
Longitude of the Perihelion	ϖ		157	51	2·4	
Longitude of Ascending Node	ν		334	23	20·8	
Inclination of the Orbit	i		13	7	54·5	
Angle of Excentricity	φ		57	57	33·9	
Mean daily Sidereal Motion	n		1076″·13165			

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ_1	Declination. Noon.	Δ_2	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_1	Meridian Passage.	Δ_2
1852.	h m	m	° ′	′					h m	m
Jan. 1	12 13·6	+ 6·7	N.19 58·6	+ 16·4	0·2885	— 248	0·3780	+ 9	17 30·1	— 32·8
11	12 20·3	3·9	20 15·0	32·2	·2637	242	·3789	10	16 57·3	35·7
21	12 24·2	+ 0·9	20 47·2	45·4	·2395	225	·3799	10	16 21·6	38·6
31	12 25·1	— 2·4	21 32·6	54·6	·2170	198	·3809	11	15 43·0	41·9
Feb. 10	12 22·7	5·6	22 27·2	56·0	·1972	151	·3820	12	15 1·1	45·1
20	12 17·1	8·5	23 23·2	47·7	·1821	92	·3832	12	14 16·0	48·0
Mar. 1	12 8·6	10·4	24 10·9	29·6	·1729	— 22	·3844	13	13 28·0	49·6
11	11 58·2	11·0	24 40·5	+ 4·0	·1707	+ 52	·3857	13	12 38·4	50·3
21	11 47·2	10·2	24 44·5	— 25·3	·1759	123	·3870	13	11 48·1	49·3
31	11 37·0	8·2	24 19·2	52·8	·1882	180	·3883	14	10 58·8	47·5
Apr. 10	11 28·8	5·6	23 26·4	75·9	·2062	222	·3897	14	10 11·3	44·7
20	11 23·2	— 2·8	22 10·5	93·8	·2284	249	·3911	15	9 26·6	42·0
30	11 20·4	+ 0·2	20 36·7	106·2	·2533	263	·3926	14	8 44·6	39·0
May 10	11 20·6	2·6	18 50·5	114·7	·2796	268	·3940	15	8 5·6	36·7
20	11 23·2	4·8	16 55·8	120·8	·3064	264	·3955	16	7 28·9	34·5
30	11 28·0	6·7	14 55·0	124·5	·3328	256	·3971	15	6 54·4	32·5
June 9	11 34·7	8·3	12 50·5	127·0	·3584	244	·3986	16	6 21·9	31·0
19	11 43·0	9·5	10 43·5	128·7	·3828	229	·4002	15	5 50·9	29·9
29	11 52·5	10·5	8 34·8	129·6	·4057	215	·4017	16	5 21·0	28·9
July 9	12 3·0	11·5	6 25·2	130·0	·4272	199	·4033	15	4 52·1	27·8
19	12 14·5	12·2	4 15·2	130·1	·4471	182	·4048	16	4 24·3	27·1
29	12 26·7	12·9	N. 2 5·1	129·4	·4653	167	·4064	16	3 57·2	26·6
Aug. 8	12 39·6	13·5	S. 0 4·3	128·6	·4820	150	·4080	16	3 30·6	25·8
18	12 53·1	14·0	2 12·9	127·2	·4970	134	·4096	16	3 4·8	25·4
28	13 7·1	14·4	4 20·1	125·3	·5104	118	·4112	15	2 39·4	25·0
Sept. 7	13 21·5	14·9	6 25·4	122·9	·5222	102	·4127	15	2 14·4	24·5
17	13 36·4	15·3	8 28·3	120·0	·5324	87	·4142	15	1 49·9	24·0
27	13 51·7	15·6	10 28·3	116·7	·5411	71	·4157	16	1 25·9	23·8
Oct. 7	14 7·3	16·1	12 25·0	112·9	·5482	55	·4173	15	1 2·1	23·4
17	14 23·4	16·4	14 17·9	108·4	·5537	38	·4188	14	0 38·7	22·9
27	14 39·8	16·7	16 6·3	103·7	·5575	23	·4202	15	0 15·8	25·0
Nov. 6	14 56·5	16·9	17 50·0	98·2	·5598	+ 7	·4217	14	23 50·8	22·4
16	15 13·4	17·2	19 28·2	92·7	·5605	— 10	·4231	14	23 28·4	22·2
26	15 30·6	17·4	21 0·9	86·6	·5595	26	·4245	14	23 6·2	·0
Dec. 6	15 48·0	17·5	22 27·5	80·6	·5569	43	·4259	13	22	8
16	16 5·5	17·5	23 48·1	74·4	·5526	60	·4272	13	2	
26	16 23·0	+ 17·5	25 2·5	— 63·2	·5466	— 77	·4285	+ 1		
36	16 40·5		S.26 10·7		0·5389		0·4298			

EPHEMERIS OF EGERIA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1852.		h m s	s	° ′ ″	″	″
February	22	12 15 6·06	− 1·98	N.23 36 46·9	+ 12·8	5·7
	23	12 14 17·95	2·04	23 41 49·8	12·5	5·7
	24	12 13 28·27	2·10	23 46 45·2	12·1	5·7
	25	12 12 37·12	2·16	23 51 32·9	11·8	5·7
	26	12 11 44·56	2·22	23 56 12·1	11·4	5·7
	27	12 10 50·66	2·28	24 0 42·4	11·0	5·7
	28	12 9 55·46	2·33	24 5 3·1	10·6	5·7
	29	12 8 59·02	2·38	24 9 13·5	10·2	5·8
March	1	12 8 1·40	2·43	24 13 13·3	9·8	5·8
	2	12 7 2·70	2·47	24 17 1·6	9·3	5·8
	3	12 6 2·98	2·52	24 20 38·2	8·8	5·8
	4	12 5 2·31	2·56	24 24 2·5	8·3	5·8
	5	12 4 0·74	2·60	24 27 14·0	7·7	5·8
	6	12 2 58·35	2·63	24 30 12·3	7·2	5·8
	7	12 1 55·23	2·65	24 32 57·3	6·6	5·8
	8	12 0 51·43	2·67	24 35 28·1	6·0	5·8
♂	9	11 59 47·09	2·69	24 37 44·3	5·4	5·8
	10	11 58 42·27	2·71	24 39 44·8	4·8	5·8
	11	11 57 37·03	2·73	24 41 29·9	4·1	5·8
	12	11 56 31·45	2·74	24 42 59·6	3·4	5·8
	13	11 55 25·59	2·75	24 44 13·2	2·7	5·8
	14	11 54 19·61	2·75	24 45 10·4	2·0	5·8
	15	11 53 13·54	2·75	24 45 51·3	1·3	5·8
	16	11 52 7·47	2·75	24 46 15·6	+ 0·6	5·8
	17	11 51 1·51	2·74	24 46 23·0	− 0·1	5·8
	18	11 49 55·73	2·73	24 46 12·7	0·8	5·7
	19	11 48 50·23	2·72	24 45 45·1	1·5	5·7
	20	11 47 45·13	2·70	24 44 59·6	2·3	5·7
	21	11 46 40·43	2·68	24 43 56·6	3·0	5·7
	22	11 45 36·24	2·66	24 42 36·3	3·7	5·7
	23	11 44 32·67	2·63	24 40 58·5	4·5	5·7
	24	11 43 29·83	2·60	24 39 2·7	5·2	5·7
	25	11 42 27·74	2·57	24 36 49·1	5·9	5·7
	26	11 41 26·46	2·53	24 34 18·6	6·6	5·7
	27	11 40 26·07	− 2·49	N.24 31 31·0	− 7·3	5·6

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ_1	Declination. Noon.	Δ_1	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_1	Meridian Passage.	Δ_1
1852.	h m	m	° ′	′					h m	m
Jan. 1	20 50·6	+18·4	S. 13 5·0	+ 96·4	0·4963	+ 58	0·3716	−33	2 9·2	−21·0
11	21 9·0	18·6	11 28·6	104·3	·5021	44	·3683	32	1 48·2	20·8
21	21 27·6	18·6	9 44·3	112·1	·5065	29	·3651	32	1 27·4	20·8
31	21 46·2	18·8	7 52·2	119·1	·5094	16	·3619	30	1 6·6	20·6
Feb. 10	22 5·0	18·8	5 53·1	125·4	·5110	+ 3	·3589	30	0 46·0	20·5
20	22 23·8	18·9	3 47·7	130·8	·5113	− 10	·3559	28	0 25·5	20·6
Mar. 1	22 42·7	18·9	S. 1 36·9	135·4	·5103	22	·3531	27	30 4·9	22·5
11	23 1·6	18·9	N. 0 38·5	139·1	·5081	33	·3504	26	23 42·4	20·5
21	23 20·5	19·0	2 57·6	141·6	·5048	44	·3478	24	23 21·9	20·4
31	23 39·5	19·1	5 19·2	143·0	·5004	56	·3454	22	23 1·5	20·3
Apr. 10	23 58·6	19·1	7 42·2	143·6	·4948	66	·3432	21	22 41·2	20·3
20	0 17·7	19·3	10 5·8	142·8	·4882	77	·3411	19	22 20·9	20·0
30	0 37·0	19·4	12 28·6	141·0	·4805	86	·3392	16	22 0·9	20·0
May 10	0 56·4	19·5	14 49·6	138·0	·4719	97	·3376	15	21 40·9	20·0
20	1 15·9	19·8	17 7·6	133·9	·4622	109	·3361	12	21 20·9	19·5
30	1 35·7	19·8	19 21·5	128·6	·4513	118	·3349	11	21 1·4	19·6
June 9	1 55·5	20·0	21 30·1	122·6	·4395	129	·3338	7	20 41·8	19·4
19	2 15·5	20·0	23 32·7	115·2	·4266	140	·3331	5	20 22·4	19·4
29	2 35·5	20·0	25 27·9	107·3	·4126	151	·3326	3	20 3·0	19·4
July 9	2 55·5	19·8	27 15·2	98·6	·3975	164	·3323	− 1	19 43·6	19·6
19	3 15·3	19·5	28 53·8	89·4	·3811	176	·3322	+ 2	19 24·0	19·9
29	3 34·8	19·0	30 23·2	80·1	·3635	189	·3324	5	19 4·1	20·5
Aug. 8	3 53·8	18·1	31 43·3	71·0	·3446	203	·3329	6	18 43·6	21·4
18	4 11·9	17·1	32 54·3	62·1	·3243	216	·3335	9	18 22·2	22·3
28	4 29·0	15·6	33 56·4	53·6	·3027	229	·3344	12	17 59·9	24·0
Sept. 7	4 44·6	13·5	34 50·0	46·2	·2798	241	·3356	14	17 35·9	26·0
17	4 58·1	11·2	35 36·2	39·0	·2557	249	·3370	15	17 9·9	28·3
27	5 9·3	8·3	36 15·2	32·4	·2308	254	·3385	18	16 41·6	31·3
Oct. 7	5 17·6	4·7	36 47·6	25·1	·2054	250	·3403	20	16 10·3	35·0
17	5 22·3	+ 0·8	37 12·7	15·5	·1804	235	·3423	22	15 35·3	38·7
27	5 23·1	− 3·3	37 28·2	+ 2·5	·1569	205	·3445	23	14 56·6	42·8
Nov. 6	5 19·8	7·1	37 30·7	− 15·3	·1364	156	·3468	25	14 13·8	46·6
16	5 12·7	10·0	37 15·4	37·6	·1208	87	·3493	27	13 27·2	49·4
26	5 2·7	11·3	36 37·8	60·7	·1121	− 4	·3520	28	12 37·8	50·6
Dec. 6	4 51·4	10·8	35 37·1	79·8	·1117	+ 83	·3548	29	11 47·2	50·0
16	4 40·6	8·6	34 17·3	90·3	·1200	165	·3577	30	10 57·2	47·7
26	4 32·0	− 5·3	32 47·0	− 91·1	·1365	+231	·3607	+31	10 9·5	−44·4
36	4 26·7		N. 31 15·9		0·1596		0·3638		9 25·1	

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ_1	Declination. Noon.	Δ_1	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_1	Meridian Passage.	Δ_1
1852.	h m	m	° ′	′					h m	m
Jan. 1	12 39·3	+ 8·0	N. 1 31·5	−18·8	0·3331	−245	0·3795	+25	17 55·8	−31·5
11	12 47·3	6·0	1 12·7	− 1·9	·3086	252	·3820	23	17 24·3	33·5
21	12 53·3	3·6	1 10·8	+16·0	·2834	253	·3843	22	16 50·8	35·9
31	12 56·9	+ 0·8	1 26·8	34·4	·2581	247	·3865	21	16 14·9	38·7
Feb. 10	12 57·7	− 2·2	2 1·2	52·0	·2334	221	·3886	20	15 36·2	41·7
20	12 55·5	4·9	2 53·2	66·5	·2113	179	·3906	18	14 54·5	44·4
Mar. 1	12 50·6	7·4	3 59·7	75·5	·1934	122	·3924	18	14 10·1	46·8
11	12 43·2	9·2	5 15·2	76·9	·1812	− 49	·3942	17	13 23·3	48·5
21	12 34·0	9·8	6 32·1	68·2	·1763	+ 30	·3959	15	12 34·8	49·0
31	12 24·2	9·3	7 40·3	53·1	·1793	109	·3974	13	11 45·8	48·6
Apr. 10	12 14·9	7·8	8 33·4	32·7	·1902	169	·3987	13	10 57·2	47·0
20	12 7·1	5·4	9 6·1	+10·6	·2071	225	·4000	12	10 10·2	44·5
30	12 1·7	2·7	9 16·7	−10·4	·2296	250	·4012	10	9 25·7	41·9
May 10	11 59·0	− 0·2	9 6·3	28·7	·2546	267	·4022	9	8 43·8	39·5
20	11 58·8	+ 2·2	8 37·6	44·4	·2813	269	·4031	7	8 4·3	37·0
30	12 1·0	4·6	7 53·2	57·2	·3082	265	·4038	7	7 27·3	34·7
June 9	12 5·6	6·3	6 56·0	67·7	·3347	255	·4045	7	6 52·6	32·9
19	12 11·9	8·0	5 48·3	75·9	·3602	241	·4052	5	6 19·7	31·4
29	12 19·9	9·4	4 32·4	82·6	·3843	225	·4057	2	5 48·3	29·9
July 9	12 29·3	10·5	3 9·8	87·9	·4068	208	·4059	+ 1	5 18·4	28·9
19	12 39·8	11·5	1 41·9	91·7	·4276	190	·4060	0	4 49·5	27·8
29	12 51·3	12·3	N. 0 10·2	94·6	·4466	173	·4060	0	4 21·7	27·1
Aug. 8	13 3·6	13·3	S. 1 24·4	96·3	·4639	155	·4060	− 2	3 54·6	26·1
18	13 16·9	13·9	3 0·7	97·1	·4794	137	·4058	4	3 28·5	25·4
28	13 30·8	14·5	4 37·8	96·8	·4931	120	·4054	4	3 3·1	25·0
Sept. 7	13 45·3	15·1	6 14·6	95·8	·5051	103	·4050	5	2 38·1	24·2
17	14 0·4	15·7	7 50·4	93·8	·5154	87	·4045	7	2 13·9	23·7
27	14 16·1	16·2	9 24·2	91·0	·5241	70	·4038	8	1 50·2	23·1
Oct. 7	14 32·3	16·7	10 55·2	87·3	·5311	53	·4030	9	1 27·1	22·8
17	14 49·0	17·1	12 22·5	82·7	·5364	38	·4021	10	1 4·3	22·3
27	15 6·1	17·6	13 45·2	77·2	·5402	21	·4011	12	0 42·0	21·7
Nov. 6	15 23·7	18·0	15 2·4	71·0	·5423	+ 3	·3999	14	0 20·3	23·5
16	15 41·7	18·3	16 13·4	63·8	·5426	− 13	·3985	14	23 56·8	21·2
26	16 0·0	18·7	17 17·2	56·1	·5413	30	·3971	15	23 35·6	20·6
Dec. 6	16 18·7	18·9	18 13·3	48·1	·5383	47	·3956	16	23 15·0	20·5
16	16 37·6	19·1	19 1·4	40·2	·5336	63	·3940	18	22 54·5	20·2
26	16 56·7	+ 19·1	19 41·6	−30·8	·5273	− 80	·3922	−20	22 34·3	−20·4
36	17 15·8		S. 20 12·4		0·5193		0·3902		22 13·9	

EPHEMERIS OF FLORA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1852.		h m s	s	° ′ ″	″	″
March	7	12 46 1·41	— 1·95	N. 4 48 33·7	+ 19·1	5·6
	8	12 45 13·93	2·00	4 56 13·4	19·2	5·6
	9	12 44 25·29	2·05	5 3 54·8	19·3	5·6
	10	12 43 35·54	2·10	5 11 37·7	19·3	5·6
	11	12 42 44·72	2·14	5 19 21·6	19·3	5·7
	12	12 41 52·86	2·18	5 27 5·9	19·3	5·7
	13	12 41 0·04	2·22	5 34 50·0	19·3	5·7
	14	12 40 6·33	2·26	5 42 33·5	19·2	5·7
	15	12 39 11·78	2·29	5 50 15·7	19·2	5·7
	16	12 38 16·44	2·32	5 57 56·3	19·1	5·7
	17	12 37 20·40	2·35	6 5 34·4	19·0	5·7
	18	12 36 23·71	2·38	6 13 9·7	18·9	5·7
	19	12 35 26·47	2·40	6 20 41·4	18·7	5·7
	20	12 34 28·71	2·42	6 28 9·1	18·5	5·7
	21	12 33 30·55	2·43	6 35 32·2	18·3	5·7
	22	12 32 32·03	2·44	6 42 50·4	18·1	5·7
	23	12 31 33·26	2·45	6 50 2·9	17·9	5·7
♂	24	12 30 34·28	2·45	6 57 9·2	17·6	5·7
	25	12 29 35·17	2·46	7 4 8·9	17·3	5·7
	26	12 28 36·01	2·46	7 11 1·4	17·0	5·7
	27	12 27 36·88	2·46	7 17 46·2	16·7	5·7
	28	12 26 37·86	2·46	7 24 23·0	16·4	5·7
	29	12 25 39·02	2·45	7 30 51·1	16·0	5·7
	30	12 24 40·40	2·44	7 37 10·2	15·6	5·7
	31	12 23 42·10	2·42	7 43 20·1	15·2	5·7
April	1	12 22 44·18	2·40	7 49 20·2	14·8	5·7
	2	12 21 46·72	2·38	7 55 10·2	14·3	5·6
	3	12 20 49·75	2·36	8 0 49·8	13·9	5·6
	4	12 19 53·36	2·34	8 6 [illegible]	[illegible]·4	5·6
	5	12 18 57·58	2·31	8 11 [illegible]	[illegible]·9	5·6
	6	12 18 2·51	2·28	8 [illegible]	[illegible]	[illegible]
	7	12 17 8·21	2·25	8 [illegible]	[illegible]	[illegible]
	8	12 16 14·71	2·21	8 [illegible]	[illegible]	[illegible]
	9	12 15 22·09	2·17	8 [illegible]	[illegible]	[illegible]
	10	12 14 30·42	2·13	8 [illegible]	[illegible]	[illegible]
	11	12 13 39·71	— 2·09	N. 8 [illegible]	[illegible]	[illegible]

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ_1	Declination. Noon.	Δ_1	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_1	Meridian Passage.	Δ_1
1852.	h m	m	° ′	′					h m	m
Jan. 1	21 59·2	+22·1	S. 18 9·4	+ 89·5	0·4038	+108	0·2954	−22	3 17·8	−17·3
11	22 21·3	22·4	16 39·9	99·7	·4146	97	·2932	19	3 0·5	17·1
21	22 43·7	22·4	15 0·2	108·3	·4243	85	·2913	16	2 43·4	17·0
31	23 6·1		13 11·9		·4328		·2897		2 26·4	
		22·4		115·3		74		13		17·0
Feb. 10	23 28·5		11 16·6		·4402		·2884		2 9·4	
20	23 51·0	22·5	9 16·1	120·5	·4467	65	·2875	9	1 52·6	16·8
Mar. 1	0 13·5	22·5	7 12·2	123·9	·4522	55	·2870	5	1 35·6	17·0
11	0 36·0	22·5	5 6·8	125·4	·4568	46	·2868	− 2	1 18·7	16·9
		22·5		125·3		38		+ 1		16·9
21	0 58·5		3 1·5		·4606		·2869		1 1·8	
31	1 21·1	22·6	S. 0 58·4	123·1	·4636	30	·2874	5	0 45·0	16·8
Apr. 10	1 43·7	22·6	N. 1 1·2	119·6	·4658	22	·2883	9	0 28·2	16·8
20	2 6·4	22·7	2 55·6	114·4	·4673	15	·2895	12	0 11·5	16·7
		22·7		107·4		8		16		18·4
30	2 29·1		4 43·0		·4681		·2911		23 53·1	
May 10	2 51·9	22·8	6 22·3	99·3	·4682	+ 1	·2929	18	23 36·5	16·6
20	3 14·8	22·9	7 52·3	90·0	·4676	− 6	·2951	22	23 20·0	16·5
30	3 37·6	22·8	9 11·8	79·5	·4662	14	·2975	24	23 3·4	16·6
		22·7		68·2		23		27		16·7
June 9	4 0·3		10 20·0		·4639		·3002		22 46·7	
19	4 22·9	22·6	11 16·4	56·4	·4609	30	·3032	30	22 29·9	16·8
29	4 45·3	22·4	12 0·5	44·1	·4570	39	·3064	32	22 12·8	17·1
July 9	5 7·4	22·1	12 32·5	32·0	·4521	49	·3098	34	21 55·5	17·3
		21·7		19·8		60		36		17·7
19	5 29·1		12 52·3	+ 8·2	·4461		·3134		21 37·8	
29	5 50·3	21·2	13 0·5	− 2·7	·4390	71	·3172	38	21 19·6	18·2
Aug. 8	6 10·9	20·6	12 57·8	12·9	·4307	83	·3210	38	21 0·6	19·0
18	6 30·7	19·8	12 44·9		·4211	96	·3250	40	20 41·0	19·6
		19·0		21·7		110		41		20·5
28	6 49·7		12 23·2		·4101		·3291		20 20·5	
Sept. 7	7 7·8	18·1	11 54·0	29·2	·3976	125	·3333	42	19 59·1	21·4
17	7 24·7	16·9	11 18·9	35·1	·3835	141	·3376	43	19 36·5	22·6
27	7 40·4	15·7	10 39·7	39·2	·3677	158	·3419	43	19 12·8	23·7
		14·2		41·1		174		43		25·3
Oct. 7	7 54·6		9 58·6		·3503		·3462		18 47·5	
17	8 7·3	12·7	9 18·1	40·5	·3311	192	·3505	43	18 20·6	26·9
27	8 18·1	10·8	8 40·6	37·5	·3104	207	·3549	44	17 51·9	28·7
Nov. 6	8 26·9	8·8	8 9·2	31·4	·2883	221	·3592	43	17 21·2	30·7
		6·4		21·7		231		43		33·1
16	8 33·3		7 47·5	− 8·6	·2652		·3635		16 48·1	
26	8 36·9	+ 3·6	7 38·9	+ 8·3	·2418	234	·3677	42	16 12·1	36·0
Dec. 6	8 37·7	− 0·8	7 47·2	28·2	·2191	227	·3720	43	15 33·4	38·7
16	8 35·3	2·4	8 15·4		·1985	206	·3761	41	14 51·5	41·9
		5·3		49·7		165		41		44·7
26	8 30·0		9 5·1		·1820		·3802		14 6·8	
36	8 22·0	− 8·0	N. 10 15·1	+ 70·0	0·1712	−108	0·3843	+41	13 19·3	−47·5

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.		Declination. Noon.		Log. of Distance from the Earth. Noon.		Log. of Distance from the Sun. Noon.		Meridian Passage.	
1852.	h m s	Δ_1 m	° ′ ″	Δ_1 ′		Δ_1		Δ_2	h m s	Δ_2 m
Jan. 1	19 35 6	+18·5	S. 24 56 8	+32·9	0·5654	+42	0·4347	+26	0 54 3	−20·9
11	19 54 1	18·2	24 23 9	39·6	·5696	26	·4373	25	0 33 4	21·2
21	20 12 3	17·8	23 44 3	45·1	·5722	+9	·4398	24	0 12 2	23·8
31	20 30 1	17·5	22 59 2	50·1	·5731	−8	·4422	24	23 48 4	21·9
Feb. 10	20 47 6	17·0	22 9 1	53·9	·5723	25	·4446	23	23 26 5	22·4
20	21 4 6	16·6	21 15 2	56·7	·5698	41	·4469	22	23 4 1	22·9
Mar. 1	21 21 2	15·9	20 18 5	58·4	·5657	58	·4491	22	22 41 2	23·5
11	21 37 1	15·4	19 20 1	58·7	·5599	75	·4513	21	22 17 7	24·0
21	21 52 5	14·7	18 21 4	58·0	·5524	91	·4534	20	21 53 7	24·7
31	22 7 2	14·0	17 23 4	56·0	·5433	108	·4554	19	21 29 0	25·6
Apr. 10	22 21 2	13·3	16 27 4	52·6	·5325	124	·4573	18	21 3 4	26·1
20	22 34 5	12·5	15 34 8	47·8	·5201	141	·4591	18	20 37 3	26·9
30	22 47 0	11·5	14 47 0	41·7	·5060	155	·4609	17	20 10 4	27·9
May 10	22 58 5	10·5	14 5 3	34·1	·4905	171	·4626	16	19 42 5	29·1
20	23 9 0	9·4	13 31 2	25·0	·4734	185	·4642	16	19 13 4	30·0
30	23 18 4	8·0	13 6 2	14·3	·4549	196	·4658	14	18 43 4	31·4
June 9	23 26 4	6·5	12 51 9	+2·2	·4353	205	·4672	14	18 12 0	33·0
19	23 32 9	4·8	12 49 7	−11·4	·4148	211	·4686	13	17 39 0	34·7
29	23 37 7	2·9	13 1 1	25·3	·3937	209	·4699	13	17 4 3	36·6
July 9	23 40 6	+0·7	13 26 4	39·8	·3728	200	·4712	11	16 27 7	38·7
19	23 41 3	−1·5	14 6 2	52·8	·3528	182	·4723	11	15 49 0	41·0
29	23 39 8	3·9	14 59 0	63·4	·3346	151	·4734	10	15 8 0	43·4
Aug. 8	23 35 9	5·9	16 2 4	69·0	·3195	109	·4744	9	14 24 6	45·2
18	23 30 0	7·6	17 11 4	68·6	·3086	−57	·4753	8	13 39 4	47·0
28	23 22 4	8·6	18 20 0	61·5	·3029	+3	·4761	8	12 52 4	47·9
Sept. 7	23 13 8	8·6	19 21 5	47·9	·3032	63	·4769	6	12 4 5	47·8
17	23 5 2	7·9	20 9 4	30·4	·3095	119	·4775	6	11 16 7	47·1
27	22 57 3	6·4	20 39 8	−12·0	·3214	163	·4781	5	10 29 6	45·6
Oct. 7	22 50 9	4·2	20 51 8	+8·0	·3377	197	·4786	5	9 44 0	43·5
17	22 46 7	2·0	20 43 8	24·0	·3574	219	·4791	3	9 0 5	41·2
27	22 44 7	+0·3	20 19 8	38·4	·3793	228	·4794	3	8 19 3	38·9
Nov. 6	22 45 0	2·5	19 41 4	50·4	·4021	231	·4797	-	7 40 4	36·8
16	22 47 5	4·4	18 51 0	60·4	·4252	225	·4[illegible]		3 6	34·9
26	22 51 9	6·2	17 50 6	68·4	·4477	216	·		18 7	33
Dec. 6	22 58 1	7·6	16 42 2	75·3	·4693	203	·		5 6	31
16	23 5 7	8·8	15 26 9	80·8	·4896	187	·		1 9	30
26	23 14 5	+9·9	14 6 1	+85·3	·5083	+171			·4	−2
36	23 24 4		S. 12 40 8		0·5254				9	

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ_1	Declination. Noon.	Δ_1	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_2	Meridian Passage.	Δ
1852.	h m s	m	° ′	′					h m s	m
Jan. 1	0 38 4	+17·8	N. 8 17·1	+70·5	0·1806	+280	0·2628	+ 6	5 56 6	−21·1
11	0 56 2	19·0	9 27·6	78·9	·2086	267	·2634	11	5 35 1	20·4
21	1 15 2	20·1	10 46·5	84·1	·2353	254	·2645	15	5 14 7	19·2
31	1 35 3	20·9	12 10·6	86·7	·2607	239	·2660	20	4 55 4	18·3
Feb. 10	1 56 2	21·7	13 37·3	85·4	·2846	227	·2680	24	4 37 0	17·4
20	2 17 9	22·4	15 2·7	82·6	·3073	214	·2704	28	4 19 3	17·7
Mar. 1	2 40 3	22·9	16 25·3	77·3	·3287	200	·2732	32	4 2·2	16·8
11	3 3·2	23·4	17 42·6	69·7	·3487	188	·2764	35	3 45·8	16·8
21	3 26·6	23·8	18 52·3	60·7	·3675	177	·2799	38	3 29·8	15·8
31	3 50·4	24·0	19 53·0	50·1	·3852	164	·2837	41	3 14·2	15·6
Apr. 10	4 14·4	24·2	20 43·1	38·3	·4016	153	·2878	44	2 58·7	15·2
20	4 38·6	24·4	21 21·4	25·7	·4169	140	·2922	46	2 43·5	15·2
30	5 3·0	24·2	21 47·1	+12·7	·4309	130	·2968	47	2 28·5	15·0
May 10	5 27·2	24·1	21 59·8	−0·8	·4439	120	·3015	49	2 13·4	15·1
20	5 51·3	23·9	21 59·0	13·7	·4559	107	·3064	50	1 58·0	15·0
30	6 15·2	23·5	21 45·3	26·5	·4666	97	·3114	51	1 42·5	15·5
June 9	6 38·7	23·1	21 18·8	38·9	·4763	85	·3165	52	1 26·6	16·1
19	7 1·8	22·6	20 39·9	50·2	·4848	74	·3217	53	1 10·3	16·3
29	7 24·4	22·0	19 49·7	60·7	·4922	62	·3270	52	0 53·4	17·1
July 9	7 46·4	21·4	18 49·0	70·2	·4984	49	·3322	53	0 36·1	18·0
19	8 7·8	20·8	17 38·8	78·7	·5033	38	·3375	52	0 18·1	20·0
29	8 28·6	20·2	16 20·1	86·1	·5071	25	·3427	52	23 57·6	19·8
Aug. 8	8 48·8	19·6	14 54·0	92·4	·5096	11	·3479	51	23 38·3	19·5
18	9 8·4	18·8	13 21·6	97·6	·5107	+ 2	·3530	51	23 18·5	20·2
28	9 27·2	18·3	11 44·0	101·6	·5105	16	·3581	51	22 57·8	21·0
Sept. 7	9 45·5	17·6	10 2·4	104·5	·5089	31	·3632	49	22 36·6	21·2
17	10 3·1	16·9	8 17·9	106·4	·5058	47	·3681	49	22 14·8	21·8
27	10 20·0	16·3	6 31·5	107·5	·5011	62	·3730	47	21 52·2	22·6
Oct. 7	10 36·3	15·6	4 44·0	107·1	·4949	79	·3777	47	21 29·1	23·1
17	10 51·9	14·8	2 56·9	106·1	·4870	96	·3824	45	21 5·2	23·7
27	11 6·7	14·0	N. 1 10·8	103·5	·4774	113	·3869	45	20 40·5	24·8
Nov. 6	11 20·7	13·1	S. 0 32·7	100·3	·4661	133	·3914	43	20 15·1	25·4
16	11 33·8	12·2	2 13·0	95·7	·4528	150	·3957	42	19 48·8	26·7
26	11 46·0	10·9	3 48·7	90·1	·4378	168	·3999	40	19 21·5	27·3
Dec. 6	11 56·9	9·7	5 18·8	83·2	·4210	185	·4039	40	18 52·9	28·6
16	12 6·6	8·1	6 42·0	74·5	·4025	200	·4079	38	18 23·2	29·7
26	12 14·7	+ 6·5	7 56·5	− 64·4	·3825	−214	·4117	+38	17 51·8	−33·5
36	12 21·2		S. 9 0·9		0·3611		0·4155		17 18·7	

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.		Declination. Noon.		Log. of Distance from the Earth. Noon.		Log. of Distance from the Sun. Noon.		Meridian Passage.	
1852.	h m s	Δ_1 m	° ′ ″	Δ_1 ′		Δ_1		Δ_1	h m s	Δ_1 m
Jan. 1	15 39 0·0	+15·6	S. 17 24 0·0	−55·6	0·5120	−128	0·4200	+11	20 55 8·8	−23·8
11	15 54 6·6	15·1	18 19 6·6	48·6	·4992	145	·4211	10	20 32 0·0	24·5
21	16 9 7·7	14·3	19 8 2·2	41·7	·4847	164	·4221	10	20 7 5·5	25·1
31	16 24 0·0	13·3	19 49 9·9	35·5	·4683	182	·4231	8	19 42 4·4	26·1
Feb. 10	16 37 3·3	12·4	20 25 4·4	29·8	·4501	200	·4239	8	19 16 3·3	27·1
20	16 49 7·7	11·0	20 55 2·2	24·8	·4301	216	·4247	7	18 49 2·2	28·5
Mar. 1	17 0 7·7	9·4	21 20 0·0	21·1	·4085	231	·4254	6	18 20 7·7	30·1
11	17 10 1·1	7·5	21 41 1·1	18·1	·3854	243	·4260	6	17 50 6·6	32·0
21	17 17 6·6	5·3	21 59 2·2	16·1	·3611	251	·4266	5	17 18 6·6	34·2
31	17 22 9·9	+2·8	22 15 3·3	15·0	·3360	252	·4271	3	16 44 4·4	36·8
Apr. 10	17 25 7·7	0·0	22 30 3·3	14·5	·3108	244	·4274	3	16 7 7·6	39·4
20	17 25 7·7	−3·0	22 44 8·8	13·8	·2864	224	·4277	2	15 28 2·2	42·5
30	17 22 7·7	5·8	22 58 6·6	12·7	·2640	191	·4279	+2	14 45 7·7	45·2
May 10	17 16 9·9	8·3	23 11 3·3	10·4	·2449	142	·4281	0	14 0 5·5	47·8
20	17 8 6·6	10·1	23 21 7·7	6·7	·2307	80	·4281	0	13 12 7·7	49·4
30	16 58 5·5	10·8	23 28 4·4	−2·8	·2227	−9	·4281	−1	12 23 3·3	50·0
June 9	16 47 7·7	10·3	23 31 2·2	0·0	·2218	+61	·4280	2	11 33 3·3	49·5
19	16 37 4·4	8·6	23 31 2·2	+1·2	·2279	126	·4278	3	10 43 8·8	47·8
29	16 28 8·8	6·4	23 30 0·0	+0·4	·2405	176	·4275	3	9 56 0·0	45·6
July 9	16 22 4·4	3·5	23 29 6·6	−3·0	·2581	212	·4272	5	9 10 4·4	42·7
19	16 18 9·9	−0·7	23 32 6·6	7·8	·2793	234	·4267	5	8 27 7·7	39·9
29	16 18 2·2	+2·1	23 40 4·4	12·4	·3027	244	·4262	6	7 47 8·8	37·2
Aug. 8	16 20 3·3	4·7	23 52 8·8	16·7	·3271	244	·4256	7	7 10 6·6	34·5
18	16 25 0·0	7·1	24 9 5·5	19·9	·3515	239	·4249	7	6 36 1·1	32·2
28	16 32 1·1	9·0	24 29 4·4	21·8	·3754	228	·4242	9	6 3 9·9	30·4
Sept. 7	16 41 1·1	10·9	24 51 2·2	22·1	·3982	215	·4233	9	5 33 5·5	28·4
17	16 52 0·0	12·6	25 13 3·3	21·1	·4197	199	·4224	10	5 5 1·1	26·7
27	17 4 6·6	13·8	25 34 4·4	18·6	·4396	183	·4214	11	4 38 4·4	25·5
Oct. 7	17 18 4·4	14·9	25 53 0·0	14·7	·4579	166	·4203	12	4 12 9·9	24·6
17	17 33 3·3	16·0	26 7 7·7	9·7	·4745	147	·4191	12	3 48 3·3	23·3
27	17 49 3·3	16·9	26 17 4·4	−3·7	·4892	131	·4179	13	3 25 0·0	22·5
Nov. 6	18 6 2·2	17·6	26 21 1·1	+3·2	·5023	114	·4166		3 2 5·5	21·7
16	18 23 8·8	18·1	26 17 9·9	11·0	·5137				40 8·8	21·4
26	18 41 9·9	18·6	26 6 9·9	18·9	·5233				19 4·4	20·8
Dec. 6	19 0 5·5	18·9	25 48 0·0	27·3	·5313					·4
16	19 19 4·4	19·1	25 20 7·7	35·9	·5375					3
26	19 38 5·5	+19·2	24 44 8·8	+45·4	·5421					
36	19 57 7·7		S. 23 59 4·4		0·5445					

EPHEMERIS OF METIS FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1852.		h m s	s	° ′ ″	″	″
May	20	17 8 1·61	− 2·36	S. 23 22 16·3	− 2·1	5·0
	21	17 7 4·54	2·40	23 23 5·6	2·0	5·1
	22	17 6 6·50	2·44	23 23 52·8	1·9	5·1
	23	17 5 7·56	2·47	23 24 37·7	1·8	5·1
	24	17 4 7·77	2·51	23 25 20·4	1·7	5·1
	25	17 3 7·19	2·54	23 26 0·7	1·6	5·1
	26	17 2 5·92	2·57	23 26 38·7	1·5	5·1
	27	17 1 4·01	2·59	23 27 14·4	1·5	5·1
	28	17 0 1·51	2·61	23 27 47·6	1·4	5·1
	29	16 58 58·51	2·63	23 28 18·5	1·3	5·1
	30	16 57 55·06	2·65	23 28 47·0	1·2	5·1
	31	16 56 51·23	2·67	23 29 13·2	1·1	5·1
June	1	16 55 47·09	2·68	23 29 37·1	1·0	5·2
	2	16 54 42·72	2·68	23 29 58·6	0·9	5·2
	3	16 53 38·18	2·69	23 30 17·7	0·8	5·2
♂	4	16 52 33·54	2·69	23 30 34·6	0·7	5·2
	5	16 51 28·88	2·69	23 30 49·3	0·6	5·2
	6	16 50 24·24	2·68	23 31 1·8	0·5	5·2
	7	16 49 19·72	2·68	23 31 12·2	0·4	5·2
	8	16 48 15·38	2·67	23 31 20·5	0·3	5·2
	9	16 47 11·30	2·66	23 31 26·9	0·2	5·1
	10	16 46 7·53	2·65	23 31 31·2	0·1	5·1
	11	16 45 4·15	2·63	23 31 33·8	− 0·1	5·1
	12	16 44 1·24	2·61	23 31 34·7	0·0	5·1
	13	16 42 58·86	2·59	23 31 34·1	+ 0·1	5·1
	14	16 41 57·09	2·56	23 31 31·9	0·1	5·1
	15	16 40 55·99	2·53	23 31 28·4	0·2	5·1
	16	16 39 55·63	2·50	23 31 23·8	0·2	5·1
	17	16 38 56·08	2·46	23 31 18·1	0·2	5·1
	18	16 37 57·41	2·42	23 31 11·6	0·2	5·1
	19	16 36 59·67	2·38	23 31 4·2	0·3	5·1
	20	16 36 2·93	2·34	23 30 56·2	0·3	5·1
	21	16 35 7·23	− 2·30	S. 23 30 47·9	+ 0·4	5·0

MEAN TIME AT GREENWICH.

Date.	*Apparent* Right Ascension. *Noon.*		*Apparent* Declination. *Noon.*		Log. of True Dist. from the Earth. *Noon.*		Meridian Passage.	
1852.	h m s	Δ_1 s	° ′ ″	Δ_1 ″		Δ_1	h m	Δ_1 m
Jan. 1	22 36 13·20		S. 9 43 1·7		1·4840503		3 54·4	
		+28·06		+170·3		+10032		−19·2
6	22 36 41·26		9 40 11·4		·4850535		3 35·2	
		30·50		184·7		9371		19·1
11	22 37 11·76		9 37 6·7		·4859906		3 16·1	
		32·76		197·8		8630		19·1
16	22 37 44·52		9 33 48·9		·4868536		2 57·0	
		34·78		209·8		7841		19·2
21	22 38 19·30		9 30 19·1		·4876377		2 37·8	
		36·62		220·3		6989		19·0
26	22 38 55·92		9 26 38·8		·4883366		2 18·8	
		38·22		229·5		6104		19·0
31	22 39 34·14		9 22 49·3		·4889470		1 59·8	
		39·59		237·1		5173		19·0
Feb. 5	22 40 13·73		9 18 52·2		·4894643		1 40·8	
		40·74		243·5		4222		19·0
10	22 40 54·47		9 14 48·7		·4898865		1 21·8	
		41·68		248·6		3239		19·0
15	22 41 36·15		9 10 40·1		·4902104		1 2·8	
		42·32		252·1		2246		18·9
20	22 42 18·47		9 6 28·0		·4904350		0 43·9	
		42·68		254·2		1231		19·0
25	22 43 1·15		9 2 13·8		·4905581		0 24·9	
		42·83		254·5		+224		18·9
Mar. 1	22 43 43·98		8 57 59·3		·4905805		0 6·0	
		42·72		253·5		−784		22·7
6	22 44 26·70		8 53 45·8		·4905021		23 43·3	
		42·39		251·3		1780		19·0
11	22 45 9·09		8 49 34·5		·4903241		23 24·3	
		41·84		247·4		2769		19·0
16	22 45 50·93		8 45 27·1		·4900472		23 5·3	
		41·04		242·3		3732		19·0
21	22 46 31·97		8 41 24·8		·4896740		22 46·3	
		40·00		235·8		4681		19·0
26	22 47 11·97		8 37 29·0		·4892059		22 27·3	
		38·77		227·9		5583		19·0
31	22 47 50·74		8 33 41·1		·4886476		22 8·3	
		37·29		218·4		6448		19·0
Apr. 5	22 48 28·03		8 30 2·7		·4880028		21 49·3	
		35·62		208·1		7268		19·1
10	22 49 3·65		8 26 34·6		·4872760		21 30·2	
		33·80		196·5		8052		19·1
15	22 49 37·45		8 23 18·1		·4864708		21 11·1	
		31·77		183·7		8773		19·2
20	22 50 9·22		8 20 14·4		·4855935		20 51·9	
		29·54		169·8		9446		19·2
25	22 50 38·76		8 17 24·6		·4846489		20 32·7	
		27·20		155·1		10046		19·2
30	22 51 5·96		8 14 49·5		·4836443		20 13·5	
		24·70		139·5		10582		19·2
May 5	22 51 30·66		8 12 30·0		·4825861		19 54·3	
		22·09		123·3		11048		19·3
10	22 51 52·75		8 10 26·7		·4814813		19 35·0	
		19·32		106·2		11451		19·3
15	22 52 12·07		8 8 40·5		·4803362		19 15·7	
		16·46		88·5		11770		19·4
20	22 52 28·53		8 7 12·0		·4791592		18 56·3	
		13·54		70·5		12012		19·4
25	22 52 42·07		8 6 1·5		·4779580		18 36·9	
		10·58		52·2		12168		19·6
30	22 52 52·65		8 5 9·3		·4767412		18 17·3	
		7·54		33·5		12240		19·5
June 4	22 53 0·19		8 4 35·8		·4755172		17 57·8	
		4·52		+14·9		12230		19·6
9	22 53 4·71		8 4 20·9		·4742942		17 38·2	
		+1·46		−4·0		12137		19·7
14	22 53 6·17		8 4 24·9		·4730805		17 18·5	
		−1·57		22·4		11954		19·7
19	22 53 4·60		8 4 47·3		·4718851		16 58·8	
		4·59		40·7		11681		19·8
24	22 53 0·01		8 5 28·0		·4707170		16 39·0	
		7·51		58·3		11325		19·7
29	22 52 52·50		8 6 26·3		·4695845		16 19·3	
		−10·36		−75·5		−10882		−19·9
July 4	22 52 42·14		S. 8 7 41·8		1·4684963		15 59·4	

MEAN TIME AT GREENWICH.

Date.	*Apparent* Right Ascension. *Noon.*		*Apparent* Declination. *Noon.*		Log. of True Dist. from the Earth. *Noon.*		Meridian Passage.	
1852.	h m s	Δ_1 s	° ′ ″	Δ_1 ″		Δ_1	h m	
July 4	22 52 42·14	−13·09	S. 8 7 41·8	−91·8	1·4684963	−10361	15 59·4	−19
9	22 52 29·05	15·74	8 9 13·6	107·5	·4674602	9759	15 39·6	19
14	22 52 13·31	18·23	8 11 1·1	122·0	·4664843	9081	15 19·7	20
19	22 51 55·08	20·54	8 13 3·1	135·7	·4655762	8314	14 59·7	20
24	22 51 34·54	22·64	8 15 18·8	147·7	·4647448	7494	14 39·7	20
29	22 51 11·90	24·55	8 17 46·5	158·5	·4639954	6609	14 19·7	20
Aug. 3	22 50 47·35	26·23	8 20 25·0	167·8	·4633345	5675	13 59·6	20
8	22 50 21·12	27·70	8 23 12·8	175·8	·4627670	4681	13 39·5	20
13	22 49 53·42	28·87	8 26 8·6	182·1	·4622989	3653	13 19·4	20
18	22 49 24·55	29·82	8 29 10·7	186·5	·4619336	2574	12 59·2	20
23	22 48 54·73	30·44	8 32 17·2	189·4	·4616762	1487	12 39·0	20
28	22 48 24·29	30·73	8 35 26·6	190·3	·4615275	−375	12 18·9	20
Sept. 2	22 47 53·56	30·76	8 38 36·9	189·5	·4614900	+734	11 58·7	20
7	22 47 22·80	30·55	8 41 46·4	187·2	·4615634	1857	11 38·6	20
12	22 46 52·25	30·02	8 44 53·6	182·8	·4617491	2952	11 18·4	20
17	22 46 22·23	29·14	8 47 56·4	176·1	·4620443	4041	10 58·2	20
22	22 45 53·09	28·02	8 50 52·5	168·0	·4624484	5084	10 38·1	20
27	22 45 25·07	26·59	8 53 40·5	158·5	·4629568	6097	10 18·0	20
Oct. 2	22 44 58·48	24·93	8 56 19·0	147·5	·4635665	7049	9 57·9	20
7	22 44 33·55	22·98	8 58 46·5	135·0	·4642714	7964	9 37·8	20
12	22 44 10·57	20·84	9 1 1·5	121·4	·4650678	8801	9 17·8	20
17	22 43 49·73	18·44	9 3 2·9	106·1	·4659479	9580	8 57·8	20
22	22 43 31·29	15·86	9 4 49·0	90·1	·4669059	10267	8 37·8	19
27	22 43 15·43	13·04	9 6 19·1	73·0	·4679326	10868	8 17·9	19
Nov. 1	22 43 2·39	10·16	9 7 32·1	55·0	·4690194	11387	7 58·1	19
6	22 42 52·23	7·14	9 8 27·1	36·4	·4701581	11830	7 38·2	19
11	22 42 45·09	4·05	9 9 3·5	−17·5	·4713411	12165	7 18·4	19
16	22 42 41·04	−0·80	9 9 21·0	+2·1	·4725576	12397	6 58·7	19
21	22 42 40·24	+2·40	9 9 18·9	21·3	·4737973	12538	6 39·1	19
26	22 42 42·64	5·66	9 8 57·6	41·0	·4750511	12584	6 19·4	19
Dec. 1	22 42 48·30	8·87	9 8 16·6	60·3	·4763095	12536	5 59·9	19
6	22 42 57·17	12·10	9 7 16·3	79·6	·4775631	12395	5 40·4	19
11	22 43 9·27	15·24	9 5 56·7	98·3	·4788026	12158	5 21·0	19
16	22 43 24·51	18·31	9 4 18·4	116·6	·4800184	11824	5 1·5	19
21	22 43 42·82	21·24	9 2 21·8	133·8	·4812008	11403	4 42·2	19
26	22 44 4·06	24·01	9 0 8·0	150·4	·4823411	10890	4 22·8	19
31	22 44 28·07	+26·73	8 57 37·6	+165·7	·4834301	+10290	4 3·6	−19
36	22 44 54·80		S. 8 54 51·9		1·4844591		3 44·4	

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ_1	Declination. Noon.	Δ_1	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_1	Meridian Passage.	Δ_1
1852.	h m s	m	° ′	′					h m s	m
Jan. 1	1 37 4·4	+ 7·3	N. 4 16·0	+ 67·2	0·3002	+ 289	0·3849	+ 19	6 55 3·3	− 32·0
11	1 44 7·7	9·1	5 23·2	74·3	·3291	276	·3868	19	6 23 3·3	30·3
21	1 53 8·8	10·6	6 37·5	79·1	·3567	258	·3887	19	5 53 0·0	28·7
31	2 4 4·4	12·0	7 56·6	81·9	·3825	241	·3906	19	5 24 3·3	27·4
Feb. 10	2 16 4·4	13·2	9 18·5	83·0	·4066	222	·3925	19	4 56 9·9	26·1
20	2 29 6·6	14·0	10 41·5	82·4	·4288	202	·3944	18	4 30 8·8	25·4
Mar. 1	2 43 6·6	14·9	12 3·9	80·4	·4490	184	·3962	18	4 5 4·4	24·4
11	2 58 5·5	15·7	13 24·3	77·2	·4674	165	·3980	18	3 41 0·0	23·7
21	3 14 2·2	16·3	14 41·5	72·9	·4839	147	·3998	17	3 17 3·3	23·0
31	3 30 5·5	16·8	15 54·4	67·6	·4986	130	·4015	17	2 54 3·3	22·7
Apr. 10	3 47 3·3	17·3	17 2·0	61·6	·5116	113	·4032	17	2 31 6·6	22·0
20	4 4 6·6	17·7	18 3·6	54·4	·5229	97	·4049	16	2 9 6·6	21·7
30	4 22 3·3	18·0	18 58·0	46·6	·5326	80	·4065	15	1 47 9·9	21·4
May 10	4 40 3·3	18·3	19 44·6	39·0	·5406	65	·4080	16	1 26 5·5	21·2
20	4 58 6·6	18·5	20 23·6	30·6	·5471	51	·4096	15	1 5 3·3	20·8
30	5 17 1·1	18·5	20 54·2	22·0	·5522	33	·4111	14	0 44 5·5	20·9
June 9	5 35 6·6	18·6	21 16·2	13·2	·5555	19	·4125	14	0 23 6·6	20·8
19	5 54 2·2	18·5	21 29·4	+ 4·7	·5574	+ 4	·4139	13	₂₀0 2·8	23·0
29	6 12 7·7	18·5	21 34·1	− 3·8	·5578	− 11	·4152	13	23 39·8	20·9
July 9	6 31 2·2	18·2	21 30·3	11·8	·5567	26	·4165	12	23 18·9	21·2
19	6 49 4·4	17·9	21 18·5	19·5	·5541	42	·4177	12	22 57·7	21·5
29	7 7 3·3	17·6	20 59·0	26·4	·5499	57	·4189	11	22 36·2	21·9
Aug. 8	7 24 9·9	17·2	20 32·6	32·8	·5442	73	·4200	10	22 14·3	22·3
18	7 42 1·1	16·6	19 59·8	38·3	·5369	90	·4210	10	21 52·0	22·8
28	7 58 7·7	16·1	19 21·5	42·6	·5279	107	·4220	9	21 29·2	23·4
Sept. 7	8 14 8·8	15·4	18 38·9	46·0	·5172	124	·4229	9	21 5·8	24·0
17	8 30 2·2	14·7	17 52·9	48·1	·5048	142	·4238	8	20 41·8	24·7
27	8 44 9·9	13·7	17 4·8	48·7	·4906	160	·4246	8	20 17·1	25·8
Oct. 7	8 58 6·6	12·8	16 16·1	47·9	·4746	178	·4254	7	19 51·3	26·7
17	9 11 4·4	11·7	15 28·2	45·1	·4568	196	·4261	6	19 24·6	27·7
27	9 23 1·1	10·4	14 43·1	40·7	·4372	213	·4267	5	18 56·9	29·1
Nov. 6	9 33 5·5	8·8	14 2·4	33·9	·4159	229	·4272	6	18 27·8	30·7
16	9 42 3·3	7·1	13 28·5	25·1	·3930	243	·4278		[illegible] 57·1	32·4
26	9 49 4·4	5·1	13 3·4	13·7	·3687	251	·4282		7	34·4
Dec. 6	9 54 5·5	2·8	12 49·7	− 0·2	·3436	253	·4286			36·7
16	9 57 3·3	+ 0·2	12 49·5	+ 14·8	·3183	246	·4289			39·2
26	9 57 5·5	− 2·4	13 4·3	+ 30·6	·2937	− 226	·4			42·0
36	9 55 1·1		N. 13 34·9		0·2711		0·4			

MEAN TIME AT GREENWICH.

Date.	Right Ascension. Noon.	Δ^1	Declination. Noon.	Δ_1	Log. of Distance from the Earth. Noon.	Δ_1	Log. of Distance from the Sun. Noon.	Δ_1	Meridian Passage.	Δ_1
1852.	h m	m	° ′	′					h m	m
Jan. 1	7 58·2		N. 9 51·4		0·2788		0·4527		13 14·2	
		−10·0		+ 5·4		− 65		+ 5		−49·2
11	7 48·2		9 56·8		·2723		·4532		12 25·0	
		10·5		15·4		+ 4		4		49·8
21	7 37·7		10 12·2		·2727		·4536		11 35·2	
		9·8		23·1		73		3		49·0
31	7 27·9		10 35·3		·2800		·4539		10 46·2	
		8·3		27·7		132		1		47·5
Feb. 10	7 19·6		11 3·0		·2932		·4540		9 58·7	
		5·9		29·7		180		+ 1		45·0
20	7 13·7		11 32·7		·3112		·4541		9 13·7	
		3·2		29·2		211		− 1		42·5
Mar. 1	7 10·5		12 1·9		·3323		·4540		8 31·2	
		− 0·5		26·6		228		2		39·7
11	7 10·0		12 28·5		·3551		·4538		7 51·5	
		+ 2·0		22·5		236		4		37·2
21	7 12·0		12 51·0		·3787		·4534		7 14·3	
		4·4		17·2		233		4		34·9
31	7 16·4		13 8·2		·4020		·4530		6 39·4	
		6·4		11·2		224		6		32·9
Apr. 10	7 22·8		13 19·4		·4244		·4524		6 6·5	
		8·2		+ 4·3		212		7		31·1
20	7 31·0		13 23·7		·4456		·4517		5 35·4	
		9·6		− 2·9		197		8		29·7
30	7 40·6		13 20·8		·4653		·4509		5 5·7	
		10·8		10·5		180		10		28·5
May 10	7 51·4		13 10·3		·4833		·4499		4 37·2	
		11·9		18·2		163		11		27·6
20	8 3·3		12 52·1		·4996		·4488		4 9·6	
		12·7		26·0		145		12		26·6
30	8 16·0		12 26·1		·5141		·4476		3 43·0	
		13·3		33·8		127		13		26·0
June 9	8 29·3		11 52·3		·5268		·4463		3 17·0	
		13·9		41·3		111		14		25·5
19	8 43·2		11 11·0		·5379		·4449		2 51·5	
		14·3		48·7		93		16		25·1
29	8 57·5		10 22·3		·5472		·4433		2 26·4	
		14·6		55·8		76		17		24·8
July 9	9 12·1		9 26·5		·5548		·4416		2 1·6	
		14·8		62·6		60		18		24·6
19	9 26·9		8 23·9		·5608		·4398		1 37·0	
		15·0		69·0		43		20		24·3
29	9 41·9		7 14·9		·5651		·4378		1 12·7	
		15·2		74·8		26		21		24·3
Aug. 8	9 57·1		6 0·1		·5677		·4357		0 48·4	
		15·3		80·3		+ 11		22		24·1
18	10 12·4		4 39·8		·5688		·4335		0 24·3	
		15·3		85·1		− 6		23		24·0
28	10 27·7		3 14·7		·5682		·4312		{ ° ° ′ } { 23 57·6 }	
		15·4		89·3		22		25		23·8
Sept. 7	10 43·1		1 45·4		·5660		·4287		23 33·8	
		15·5		93·1		39		25		23·8
17	10 58·6		N. 0 12·3		·5621		·4262		23 10·0	
		15·5		96·0		56		28		23·9
27	11 14·1		S. 1 23·7		·5565		·4234		22 46·1	
		15·4		98·2		72		28		23·9
Oct. 7	11 29·5		3 1·9		·5493		·4206		22 22·2	
		15·4		99·8		90		30		24·1
17	11 44·9		4 41·7		·5403		·4176		21 58·1	
		15·4		100·6		108		31		24·0
27	12 0·3		6 22·3		·5295		·4145		21 34·1	
		15·3		100·5		128		32		24·0
Nov. 6	12 15·6		8 2·8		·5167		·4113		21 10·1	
		15·3		99·6		145		34		24·1
16	12 30·9		9 42·4		·5022		·4079		20 46·0	
		15·0		97·8		164		35		24·5
26	12 45·9		11 20·2		·4858		·4044		20 21·5	
		14·9		95·1		184		36		24·5
Dec. 6	13 0·8		12 55·3		·4674		·4008		19 57·0	
		14·6		91·6		205		38		24·7
16	13 15·4		14 26·9		·4469		·3970		19 32·3	
		14·1		86·9		225		38		25·3
26	13 29·5		15 53·8		·4244		·3932		19 7·0	
		+13·4		− 81·1		−246		−40		−26·1
36	13 42 9		S. 17 14·9		0·3998		0·3892		18 40·9	

EPHEMERIS OF VICTORIA FOR THE OPPOSITION.

At Transit over the Meridian of Greenwich.

Date.		*Apparent* Right Ascension.	Variation of Right Asc. in 1 Hour of Long.	*Apparent* Declination.	Variation of Declination in 1 Hour of Long.	Hor. Par.
1852.		h m s	s	° ′ ″	″	″
January	1	7 57 40·22	−2·38	N. 9 51 27·2	+0·1	4·5
	2	7 56 42·69	2·41	9 51 33·1	0·4	4·5
	3	7 55 44·36	2·44	9 51 45·8	0·7	4·5
	4	7 54 45·34	2·47	9 52 5·1	0·9	4·5
	5	7 53 45·65	2·50	9 52 31·2	1·2	4·5
	6	7 52 45·36	2·52	9 53 3·7	1·5	4·6
	7	7 51 44·47	2·55	9 53 42·6	1·8	4·6
	8	7 50 43·13	2·57	9 54 28·0	2·0	4·6
	9	7 49 41·35	2·58	9 55 19·7	2·3	4·6
	10	7 48 39·20	2·60	9 56 17·5	2·5	4·6
	11	7 47 36·73	2·61	9 57 21·3	2·8	4·6
	12	7 46 34·03	2·62	9 58 31·3	3·0	4·6
	13	7 45 31·16	2·62	9 59 46·9	3·3	4·6
	14	7 44 28·16	2·63	10 1 8·3	3·5	4·6
	15	7 43 25·13	2·63	10 2 35·3	3·7	4·6
♂	16	7 42 22·12	2·62	10 4 7·7	4·0	4·6
	17	7 41 19·19	2·62	10 5 45·5	4·2	4·6
	18	7 40 16·42	2·61	10 7 28·6	4·4	4·6
	19	7 39 13·89	2·60	10 9 16·5	4·6	4·6
	20	7 38 11·65	2·59	10 11 9·2	4·8	4·6
	21	7 37 9·77	2·57	10 13 6·7	5·0	4·6
	22	7 36 8·32	2·55	10 15 9·0	5·2	4·6
	23	7 35 7·37	2·53	10 17 15·4	5·4	4·6
	24	7 34 6·98	2·50	10 19 26·1	5·6	4·6
	25	7 33 7·21	2·48	10 21 40·[illegible]	5·7	4·5
	26	7 32 8·13	2·45	10 23 [illegible]	[illegible]·9	4·5
	27	7 31 9·81	2·41	10 26 [illegible]	[illegible]·0	4·[illegible]
	28	7 30 12·28	2·38	10 [illegible]		
	29	7 29 15·61	2·34	10		
	30	7 28 19·86	2·30	10		
	31	7 27 25·08	2·26	10		
February	1	7 26 31·32	2·22	10		
	2	7 25 38·59	−2·18	N. [illegible]		

EPHEMERIS OF ENCKE'S COMET.

JANUARY, 1852.

Day of the Month.	At Mean Midnight at Greenwich.						Mean Time of Meridian Passage.
	Apparent Geocentric Right Ascension.	Diff. for 1 hour.	*Apparent* Geocentric Declination.	Diff. for 1 hour.	Logarithm of Distance from the		
					Earth.	Sun.	
	h m s		° ′ ″	″			h m
1	22 54 17·78	+2·223	N.3 17 24·3	+ 8·27	0·19385	0·16558	4 12·1
2	22 55 11·12	2·287	3 20 42·8	8·72	·19364	·16152	4 9·1
3	22 56 6·06	2·350	3 24 12·1	9·23	·19337	·15740	4 6·1
4	22 57 2·50	2·414	3 27 53·4	9·68	·19304	·15321	4 3·0
5	22 58 0·44	2·477	3 31 45·7	10·14	·19264	·14896	4 0·0
6	22 58 59·99	2·540	3 35 49·0	10·60	·19219	·14464	3 57·1
7	23 0 1·03	2·602	3 40 3·3	11·05	·19167	·14025	3 54·2
8	23 1 3·48	2·665	3 44 28·6	11·55	·19109	·13578	3 51·3
9	23 2 7·52	2·727	3 49 5·9	11·93	·19042	·13125	3 48·4
10	23 3 12·96	2·789	3 53 52·2	12·43	·18970	·12664	3 45·5
11	23 4 19·90	2·851	3 58 50·5	12·85	·18891	·12194	3 42·7
12	23 5 28·35	2·912	4 3 58·8	13·30	·18804	·11717	3 39·9
13	23 6 38·19	2·973	4 9 18·1	13·76	·18710	·11231	3 37·1
14	23 7 49·54	3·034	4 14 48·4	14·18	·18608	·10736	3 34·3
15	23 9 2·38	3·095	4 20 28·7	14·59	·18500	·10234	3 31·6
16	23 10 16·71	3·156	4 26 18·9	15·02	·18382	·09722	3 28·9
17	23 11 32·46	3·216	4 32 19·3	15·43	·18257	·09200	3 26·2
18	23 12 49·70	3·276	4 38 29·6	15·84	·18124	·08668	3 23·6
19	23 14 8·34	3·335	4 44 49·8	16·22	·17983	·08127	3 21·0
20	23 15 28·39	3·396	4 51 19·1	16·68	·17832	·07575	3 18·4
21	23 16 50·03	3·457	4 57 59·5	17·01	·17673	·07013	3 15·8
22	23 18 12·98	3·518	5 4 47·7	17·43	·17504	·06438	3 13·2
23	23 19 37·42	3·578	5 11 46·1	17·76	·17326	·05853	3 10·6
24	23 21 3·27	3·638	5 18 52·3	18·18	·17139	·05256	3 8·1
25	23 22 30·51	3·698	5 26 8·6	18·51	·16941	·04646	3 5·6
26	23 23 59·26	3·757	5 33 32·9	18·84	·16734	·04024	3 3·1
27	23 25 29·30	3·815	5 41 5·1	19·14	·16516	·03388	3 0·7
28	23 27 0·84	3·873	5 48 44·4	19·51	·16287	·02739	2 58·3
29	23 28 33·78	3·927	5 56 32·6	19·76	·16047	·02074	2 55·9
30	23 30 8·03	3·990	6 4 26·8	20·05	·15796	·01396	2 53·5
31	23 31 43·78	4·048	6 12 28·0	20·30	·15533	0·00701	2 51·2
32	23 33 20·93	+4·102	N.6 20 35·2	+20·59	0·15258	9·99990	2 48·9

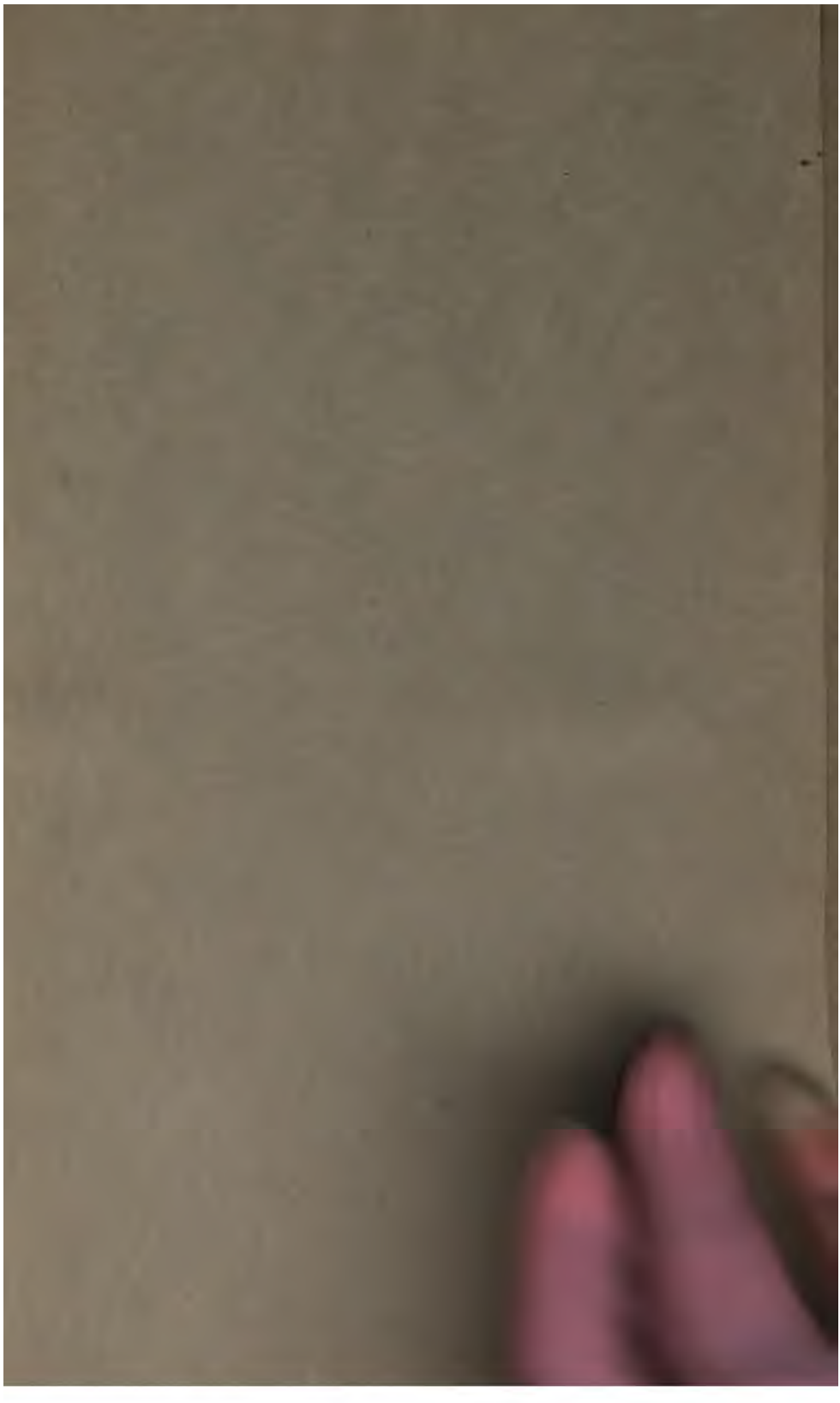
EPHEMERIS OF ENCKE'S COMET.

FEBRUARY, 1852.

Day of the Month.	At Mean Midnight at Greenwich.					Mean Time of Meridian Passage.
	Apparent Geocentric Right Ascension.	Diff. for 1 hour.	*Apparent* Geocentric Declination.	Diff. for 1 hour.	Logarithm of Distance from the	
					Earth.	Sun.	
	h m s	s	° ′ ″	″			h m
1	23 33 20·93	+4·102	N.6 20 35·2	+20·59	0·15258	9·99990	2 48·9
2	23 34 59·37	4·160	6 28 49·4	20·76	·14970	·99263	2 46·5
3	23 36 39·22	4·218	6 37 7·6	21·00	·14670	·98518	2 44·2
4	23 38 20·46	4·269	6 45 31·7	21·13	·14355	·97755	2 41·9
5	23 40 2·91	4·330	6 53 58·8	21·30	·14028	·96974	2 39·7
6	23 41 46·84	4·381	7 2 29·9	21·42	·13685	·96172	2 37·5
7	23 43 31·99	4·439	7 11 4·0	21·47	·13327	·95350	2 35·3
8	23 45 18·54	4·489	7 19 39·2	21·50	·12955	·94507	2 33·1
9	23 47 6·28	4·540	7 28 15·2	21·46	·12565	·93641	2 31·0
10	23 48 55·23	4·589	7 36 50·2	21·42	·12160	·92753	2 28·9
11	23 50 45·37	4·635	7 45 24·2	21·29	·11736	·91840	2 26·8
12	23 52 36·61	4·681	7 53 55·2	21·08	·11293	·90902	2 24·7
13	23 54 28·95	4·718	8 2 21·0	20·78	·10833	·89937	2 22·6
14	23 56 22·19	4·760	8 10 39·8	20·44	·10351	·88943	2 20·5
15	23 58 16·42	4·789	8 18 50·4	19·95	·09848	·87922	2 18·5
16	0 0 11·35	4·813	8 26 49·2	19·44	·09322	·86871	2 16·5
17	0 2 6·87	4·830	8 34 35·8	18·68	·08774	·85789	2 14·5
18	0 4 2·79	4·842	8 42 4·2	17·81	·08201	·84675	2 12·5
19	0 5 59·00	4·842	8 49 11·6	16·80	·07601	·83527	2 10·4
20	0 7 55·21	4·825	8 55 54·9	15·58	·06975	·82344	2 8·4
21	0 9 51·02	4·800	9 2 8·9	14·07	·06320	·81123	2 6·4
22	0 11 46·21	4·753	9 7 46·7	12·37	·05634	·79868	2 4·4
23	0 13 40·28	4·685	9 12 43·5	10·31	·04916	·78574	2 2·4
24	0 15 32·73	4·598	9 16 50·9	7·92	·04164	·77242	2 0·4
25	0 17 23·07	4·471	9 20 1·0	5·13		·75871	1 58·3
26	0 19 10·37	4·312	9 22 3·7	+ 1·[illegible]		74461	1 56·1
27	0 20 53·85	4·119	9 22 46·0	— ?		73014	
28	0 22 32·70	3·863	9 21 54·8			1530	
29	0 24 5·41	3·553	9 19 14·1			013	
30	0 25 30·67	+3·171	N.9 14 24·9	—		467	

EPHEMERIS OF ENCKE'S COMET.

MARCH, 1852.

Day of the Month.	At Mean Midnight at Greenwich.						Mean Time of Meridian Passage
	Apparent Geocentric Right Ascension.	Diff. for 1 hour.	*Apparent* Geocentric Declination.	Diff. for 1 hour.	Logarithm of Distance from the Earth.	Logarithm of Distance from the Sun.	
	h m s	s	° ′ ″	″			h m
1	0 25 30·67	+ 3·171	N. 9 14 24·9	— 18·21	9·98836	9·68467	1 46·8
2	0 26 46·77	2·704	9 7 7·9	25·50	·97796	·66899	1 44·2
3	0 27 51·67	2·144	8 56 55·8	33·92	·96710	·65315	1 41·5
4	0 28 43·12	1·469	8 43 21·8	43·72	·95577	·63728	1 38·5
5	0 29 18·37	+ 0·672	8 25 52·5	54·93	·94401	·62153	1 35·3
6	0 29 34·50	— 0 266	8 3 54·2	67·74	·93186	·60607	1 31·8
7	0 29 28·12	1·341	7 36 48·5	82·14	·91934	·59116	1 27·9
8	0 28 55·93	2·572	7 3 57·1	98·27	·90658	·57705	1 23·6
9	0 27 54·20	3·939	6 24 38·6	115·68	·89370	·56407	1 18·9
10	0 26 19·67	5·412	5 38 22·4	134·09	·88089	·55258	1 13·7
11	0 24 9·64	6·969	4 44 44·3	152·85	·86835	·54294	1 7·9
12	0 21 22·38	8·522	3 43 36·0	170·90	·85637	·53550	1 1·5
13	0 17 57·85	10·010	2 35 14·5	187·79	·84522	·53055	0 54·5
14	0 13 57·61	11·380	N. 1 20 7·6	201·66	·83522	·52833	0 46·9
15	0 9 24·49	—12·591	S. 0 0 32·3	—210·50	9·82666	9·52894	0 38·7

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